Marine Corps Gazette

MARCH 1956

FORTY CENTS

. . . a force in readiness sharpens its edge

Marine Corps Gazette

MARCH 1956
NUMBER 3
VOLUME 40

PROFESSIONAL MAGAZINE FOR UNITED STATES MARINES

IN THIS ISSUE

Aviation Boot Camp	*Maj E. S. Maloney*	12	
Hail To The BARman	*Capt W. J. Davis*	17	
Background on Formosa	*Capt R. L. Johnson*	20	
The Marine Corps Has a Mortar	*Capt B. J. Hill*	25	
Guerrilla Warfare	*Mr. G. Z. Hanrahan*	26	
New Developments — Ordnance	*Capt C. B. Haslam*	32	
Reorganize the Service Regt	*LtCol C. E. Warren*	36	
Target Acquisition	*LtCol H. J. Woessner*	41	
NGF Support in the Solomons	*Col F. P. Henderson*	44	
Your Son Can Be an Officer	*Capt H. L. Wilkerson*	52	
Let There Be Light	*LtCol E. P. Dupras*	56	
Message Center	2	In Brief	34
Introducing	10	Passing in Review	61

COVER

It's Spring — and all over the world Marines will saddle-up and take off on maneuvers. From the Far East to the East Coast, at Pendleton, Lejeune — in Japan and on Okinawa our FMF troopers will move out to test new equipment and tactics. Fire team leaders will shift their BARmen, staffs will be moving battalions and regiments. Some new concepts will stand and some will fall by the wayside, but all will be soundly tested as a force-in-readiness sharpens its edge on land, sea and in the air.

Editor-in-Chief
Col L. C. Hudson

Editorial Board
BrigGen D. M. Weller, Col S. R. Shaw, Col N. J. Anderson, Col J. D. Hittle, LtCol J. F. Wagner, Jr, LtCol J. R. Stone, Capt C. V. Judge

Editor and Publisher
Maj David M. Cox

Managing Editor
Capt H. W. Henzel

Business Manager
IstLt R. A. Haydock

Associate Editor
CWO Fred T. Stolley

Secretary
MSgt Annette Parziale

Editorial Assistant
TSgt B. M. Rosoff

Art Staff
TSgt D. W. Kiser, TSgt S. E. Dunlap, Jr, SSgt G. C. Johnson

Business Staff
SSgt M. Lehrer, SSgt J. R. Goodman, Jr, Pfc B. I. Silverman, Mrs N. Miller

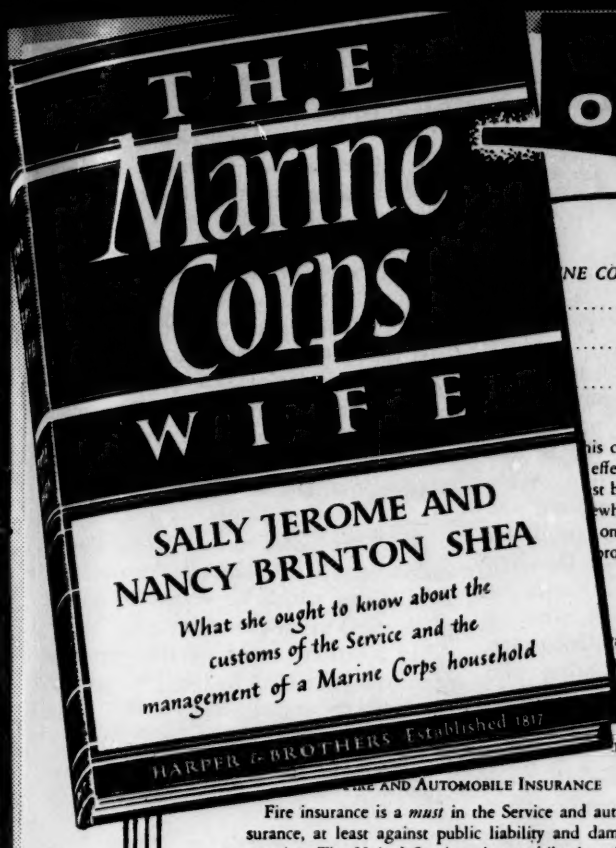
Circulation Staff
Sgt J. K. McCormack, Sgt R. A. Sambroak, Cpl J. J. Cetinski, Cpl R. C. Parziale, Cpl R. F. Price, Cpl R. L. Stannard, Pfc J. T. Trocki, Pfc P. H. Patton

Advertising Representative
Shannon & Associates, Inc.
New York — 28 West 44th Street, Chicago, Atlanta, Cleveland, Detroit, St. Louis, Kansas City, Mo., Los Angeles and San Francisco

Opinions expressed in the Gazette do not necessarily reflect the attitude of the Navy Department nor of Headquarters, United States Marine Corps

PUBLISHED BY THE MARINE CORPS ASSOCIATION

Membership in the Association is open to all members and honorably discharged former members of the Armed Forces of the US. Dues in the Association are $4.00 per year and members receive the journal of the Association The Marine Corps Gazette monthly. The Marine Corps Gazette, copyright 1956 by the Marine Corps Association, Marine Corps Schools, Quantico, Va. is entered as second-class mail, privileges authorized at Quantico, Va., and Baltimore, Md. Editorial, Business offices: Marine Corps Schools, Quantico, Va. Editorial telephone—4780; Business and Bookshop—5750. Subscription rate, $4.00 per year; single copy 40 cents. Articles, photographs, book reviews and letters of professional interest are invited. If accepted, these are paid for at prevailing space rates. Material may not be reproduced without permission. Picture credits: all pictures official Department of Defense photos unless otherwise credited.



Insurance ONE FOR THE BOOKS

Address

Address

Address

is child, subse-
effect of revok-
st be made.
ewhere. If cash
only, his wife
robated, even

ated, owing
places for
spital care.
ought to)
It is good
insurance.

Fire and Automobile Insurance

Fire insurance is a *must* in the Service and automobile insurance, at least against public liability and damage, is imperative. The United Services Automobile Association, with home office located at 1400 East Grayson Street, San Antonio, Texas, is increasingly popular with Marine officers, warrant officers, and commissioned personnel of the Armed Forces.

The USAA was organized in 1922 at Kelly Field, Texas, and its primary concern is to provide inexpensive insurance for its members. No one makes a profit except the members

themselves, each receiving his proportionate share of savings effected by the end of the year. It has proved itself to be the best and most inexpensive insurance for Service personnel. USAA is managed entirely by Armed Forces officers and is now one of the ten largest reciprocal auto insurance institutions in the United States.

Originally, United Services provided insurance for automobiles only, but as a convenience to members additional protection was extended to provide fire, theft, and transportation coverage for household goods and personal effects in a floater service policy. Another attractive feature of the annual floater policy is that it covers fire damage, even cigarette burns, and smoke or water damage caused by fire or lightning. Your goods are covered while in storage, in transit; protected against burglary, pilferage, larceny, holdup, and embezzlement. This policy is valid not only within the United States, its territories and possessions but in various other countries as well. To be assured of continuous protection a member may authorize automatic renewal with the Association.

Since automobile insurance rates vary in different localities, it is necessary to keep the company informed as to the permanent location of your car so that correct rates can be applied to the policy. The coverages offered are: bodily injury, property damage, medical payments, comprehensive (fire, theft, windstorm, glass breakage, etc.), and collision.

Income Tax

It is a common and erroneous belief in civilian circles that Service personnel are exempt from taxes. Under the present federal personal income-tax law a husband and wife may file a joint income-tax return. If the wife has an income from any outside source, she must keep an accurate record of sums received, with the date of receipt and source of such income.

Reprinted by permission of Harper & Bros., publishers of THE MARINE CORPS WIFE, by Sally Jerome and Nancy Shea.

Thanks to the authors and and publishers of MARINE CORPS WIFE for so ably telling our story.

Over quarter million members of the USAA, in every branch of the service, or retired, are already enjoying the thorough coverage and liberal savings offered by USAA. Over 7 million dollars were paid in dividends to policy owners last year and liberal dividends have been paid to members ever since USAA was organized 34 years ago. Only preferred risks are insured by USAA, the *oldest, largest* and *strongest* non-profit insurance organization serving the armed forces officer.

So wherever you serve — in the air, on land or sea — take advantage of the inexpensive protection a USAA policy affords. Insure today — with USAA.

A USAA policy will cover you in the United States, its possessions and territories; Canada, Cuba and the Canal Zone; Japan, the Philippines and certain U. S. military bases in the Pacific, in addition to Western Continental Europe. Claims are settled promptly even in the most remote places.

United Services
AUTOMOBILE ASSOCIATION

Charles E. Cheever, Colonel, USA — Retired, General Manager

Dept. H-0, USAA Building, 4119 Broadway, San Antonio 9, Texas

☐ Send information on Insurance covering household effects. ☐ Send information on automobile insurance based on following data:

Car Year	Make	Model	Body Type	Pass. Cap.	Serial Number	Motor No.	No. Cyls.

Factory Price	Cost	Purchase Date	New/Used	Current Car License		Name in which car legally registered
				Year	State	

Is the automobile customarily used in the occupational duties of any person except in going to and from the principal place of occupation?_____

Is the automobile customarily used in driving to or from work?_____

If the automobile is customarily used in driving to or from work, how many road miles is the car driven one way?_____

Are any of the operators under 25 owners or principal operators of the automobile?_____

How many operators under age 25?_____ Age of each:_____

Relationship to owner:_____

If any of the operators under 25 are owners, or principal operators, of the automobile,

(a) are all such operators married?_____

(b) do all such operators have legal custody of a child resident in the household?_____

Name_____ Rank_____ Serial No._____

Military Address_____

If car not at above address, give location of car_____ **H-0**

message center

NCO Prestige — Pro and Con

. . . The recent discussion concerning the prestige of the NCOs in the Marine Corps indicates two things: first, that the problem exists, and second, that there is an awareness of that problem.

That the problem exists, or at least that an apparent problem exists, is indisputable. My little Webster's dictionary gives two definitions of the word *prestige:* 1) power to command admiration and 2) ascendency derived from general admiration or esteem; commanding position in men's minds. You will notice that in the first definition above that "power to command admiration" can only rest with the NCO himself. It does not come from someone else — enlisted man or officer. So also, with the second definition, "ascendency derived from general admiration or esteem." Admiration and esteem are not arbitrary emotions. Respect and admiration will be freely given when they are earned and deserved; and they can only be earned by the individual himself.

Recent discussion of prestige often refer to the NCOs of the Corps during and previous to WWII. I first entered the Corps in the Spring of 1941, and can remember that many of the sergeants of my first duty station had 10, 12, or even 15 years' service. They talked of Nicaragua, Shanghai and China. A few of the Staff NCOs were veterans of WWI. Promotions had been slow so that the senior ranks were composed of older men. They had both age and experience behind them, and they were still Marines and acted like Marines. They had the respect and admiration of the younger and junior men because they had earned it.

Going back to the old customs and outdated articles of uniform will not bring prestige to any rank. Rank imposes obligation and responsibilities. It's up to the NCOs of today's Corps to assume those obligations and responsibilities and to carry them out in such a manner as will earn them their proper respect. The officers should see that enlisted men and NCOs have the opportunity to carry out their duties and responsibilities. I saw one platoon leader fall out his platoon and *personally* form a working party of 10 men while permitting his NCOs to do nothing but stand around and look helpless. Such procedure does not earn the proper respect for either the officer or the NCOs. On the other hand, when a group of enlisted men were standing around the doorway of a building and an officer told a sergeant to police up the area the officer returned to find the sergeant policing the area by himself while a dozen or more lower-grade enlisted men were standing around shooting the breeze.

Many men are confusing the privilege of rank with prestige. It is true that many privileges of the senior ranks have disappeared or been given to the lower ranks. Here again the fault is mostly with the men themselves. If we have lost those privileges it is because we have abused or neglected them. As a matter of fact, many privileges still exist, but the individual refuses to accept the obligations which go with them.

I am sure that many of the present-day NCOs and officers will not agree with me, but I am thoroughly convinced that if we want to retain the prestige of

the *Old Corps,* then we must first be Marines — not merely civilians in Marine uniforms. That means be regulation, insist on orders being carried out immediately when given, keeping uniforms neat and brass shined, carrying out orders to the best of our ability, assuming the responsibilities of our rank and accepting the obligations which accompany it.

As I see it, we have two difficulties to overcome: 1) lack of initiative on the part of the man himself and 2) officers not permitting enlisted men to assume the duties and responsibilities imposed by their rank. The first difficulty the man must resolve himself. Concerning the second difficulty, it is often stated that the man can't do it right or doesn't know how. Remember that the man himself needs this experience. He will never learn if not given the opportunity, and it is no crime to make a mistake. It would be far better for a man to make a mistake now and to rectify it than to wait until he is in battle when mistakes are costly in lives and property and cannot be rectified.

If we want to be respected as Marines, we must be Marines. If we want to be respected as NCOs, we must be more than NCOs — we must be good NCOs.

MSgt Karr Ross

Washington, DC

. . . TSgt Towe wanted to see the reaction of other Marines to his opinions — opinions which he versed in an explicit, well-written manner.

My reaction: I don't think you have opinions—you have facts. If anyone hit the nail on the head, you did. TSgt Towe, I concur.

Sgt. R. T. Riffle, Jr.

Quantico, Va.

. . . Hurray for TSgt Towe! Now there's a Gunny with guts. I've heard these same statements in every outfit that I have been in for the past several years. We all know that the Marine Corps is gradually getting to be like the Navy — either you are a chief or you might as well be a private. I have seen this stage gradually approaching for about 4 years now. Unless our present Commandant decides that we are all Staff NCOs and not just the 7th paygrade, then pretty soon the only difference between a private and a TSgt will be in pay.

The SSgt and TSgt has nothing in the way of incentives to keep working for these days. The TSgt knows that his chance of making MSgt is very remote; the SSgt can see himself maybe making TSgt one of these days, but that is all. I distinctly remember the enthusiasm displayed among the TSgts when the MGGO came out setting up qualifications for promotion to WO. We thought this was our big chance. Our enthusiasm quickly died when the MCMemo waived the written examinations. We knew then the real purpose of the Warrant Officer program — preferred treatment for a certain few. The slow promotion to MSgt is necessary, and we all realize what brought that on, but give us an equal or fair chance when an opportunity comes along for WO or LDO.

The only way that I know to actually start on the way back to the recovery of the Staff NCO's prestige is to have written orders, signed by the CMC. This is necessary for many COs make their own ground rules. A staff NCO shouldn't have to stand "junk on the bunk" in-

ON THE JOB
...not "on the way"

Guided missile development takes top priority in the Nation's defense program today— and missile specialists are among the military's most valuable men. That's why they're speeded to new assignments via the Scheduled Airlines — the *five times faster way.* It's usually the cheaper way, too, when pay and per diem dollars are considered. So, next time you're moving one or many, call your Scheduled Airlines representative — and find out more about the advantages of Scheduled flight.

Guidance radar operator makes final check before the Terrier missile is launched from deck of a Navy cruiser.

10% DISCOUNT for official travel on TR's

Dependable, Scheduled Service Saves Millions of Valuable Man Hours for the Military

THE CERTIFICATED *Scheduled Airlines* OF THE U.S.A.

ALASKA AIRLINES
ALLEGHENY AIRLINES
AMERICAN AIRLINES
BONANZA AIR LINES
BRANIFF AIRWAYS
CAPITAL AIRLINES
CENTRAL AIRLINES
COLONIAL AIRLINES
CONTINENTAL AIR LINES

DELTA AIR LINES
EASTERN AIR LINES
FRONTIER AIRLINES
LAKE CENTRAL AIRLINES
LOS ANGELES AIRWAYS
MACKEY AIRLINES
MOHAWK AIRLINES
NATIONAL AIRLINES

NEW YORK AIRWAYS
NORTH CENTRAL AIRLINES
NORTHEAST AIRLINES
NORTHWEST ORIENT AIRLINES
OZARK AIR LINES
PACIFIC NORTHERN AIRLINES
PIEDMONT AIRLINES
RESORT AIRLINES

SOUTHERN AIRWAYS
SOUTHWEST AIRWAYS
TRANS-TEXAS AIRWAYS
TRANS WORLD AIRLINES
UNITED AIR LINES
WEST COAST AIRLINES
WESTERN AIR LINES
WIEN ALASKA AIRLINES

spections nor should he have to check out on liberty. He should not have an M1 rifle when he is out with the troops trying to instruct them, or drilling a platoon. He should be depended upon more by the officers, and if he can't be depended upon or measure up, then he should be stripped of his rockers. Commanding officers should have the authority to reduce TSgts and MSgts just like they do SSgts. That alone would keep Staff NCOs on the ball a little more and the Marine Corps would receive their full ability.

These are just a few of the many injustices the Staff NCO has felt during the past years. It's going to take years to overcome them. In the meantime, the Marine Corps is going to lose many top-notch NCOs; even though many of them may not get discharged, the Marine Corps will still suffer their loss of service. General Shepherd once said, and I read it, that "The Staff NCOs are the backbone of the Marine Corps." I believe he meant all men wearing a rocker—not just the top paygrade, as it is beginning to be.

TSgt C. W. Ward, Jr.
Miami, Fla

. . . TSgt Towe had the answer in his own letter for his question as to why the gradual deterioration of NCO (and officer) prestige and privileges.

It is in the words, "The NCO's layout look less neat than the Pvt's," and after that the alibi, "It was hauled in a car."

Would he deny the fact that if an NCO is inferior to anyone of lower rank, that his CO and others then are justified in having less respect, pay and privileges to bestow on him. If a man shows the efficiency and initiative of a Pvt, the Marine Corps and taxpayers (and good men) are carrying a parasite until he begins to draw Pvt's pay. On the other hand, the Pvt who is doing a more efficient job than the NCO is suffering an injustice until the rates and pay of the two are exchanged. The senior (as per Maj Averill's article, Jan issue of Gazette) is obligated to *set the example.*

Besides the outstanding bad examples set in personal and uniform appearance and disregard of customs and courtesies, one NCO abuse of privileges is outstanding — the staff quarters in barracks. In most instances 90 per cent of these rooms are locked for barracks inspection. In 99 per cent of the cases where I procured keys to these rooms, they looked as though the occupants had never heard of cleanliness and orderliness on their way up through the ranks. The NCOs he mentioned who had prestige in WWII would have had their bunks squared away, decks cleaned and loose articles neatly stowed by 0800 every morning, even if they had been on independent duty in the Canadian Wilderness. My advise to TSgt Towe and all Marines is to read and heed Maj Averill's article *Jack 'Em Up* until the practices he mentions are second nature to us and we refuse to even give legitimate reasons for failures, until we are completely cured of making alibis.

Capt "R" "B" Wilson
El Toro, Calif

. . . "Lo the Poor Indian" was once the word. Times have changed along with the chiefs. The word now is "Lo the Poor Professional First Sergeant and Sergeant Major."

Under current directives, initiated to restore prestige to the First Sergeant and Sergeant Major, the professional who has devoted his past 10 to 20 years' service toward becoming the first sergeant or the sergeant major has been left out. Unless an individual holds a combat or combat-supported additional or primary MOS, he is ineligible for designation as a First Sergeant or Sergeant Major.

In the event he holds an additional MOS and has not performed 90 days duty in the MOS within the past 48 months his MOS has been voided.

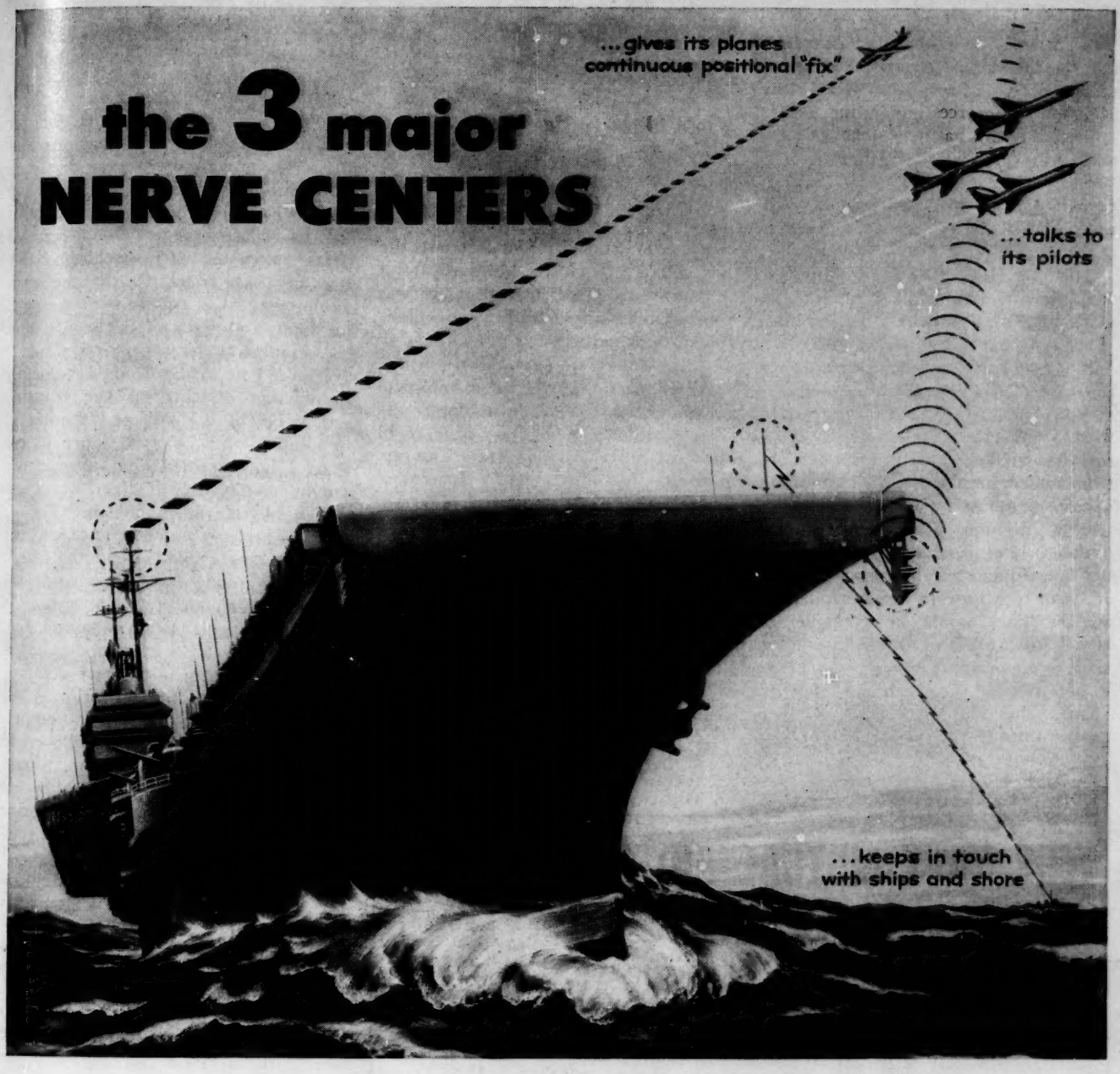
A great many professional First Sergeants and Sergeants Major have not held an MOS other than the administrative MOS designating his billet as a First Sergeant or Sergeant Major since the SSN was changed to MOS. Personnel in this category are the First Sergeants and Sergeants Major, so designated, based upon their rank and ability to hold these billets. They possess the facility of adjusting themselves to the type of unit they are assigned and can do the job in any type of unit, whether it be infantry, artillery, aircraft squadron or special duty.

What happens now? Retire? Retrain and get out of the program? Sit tight and work for your chief clerk? Check the Air Force Recruiting program and try on the Air Force Blue?

I have submitted a letter requesting designation as First Sergeant/Sergeant Major and have requested a waiver of the required combat/combat-supported MOS in hopes that the experience I have gained will not be a total loss to myself and the Marine Corps, and that other professional First Sergeants and Sergeants Major will be able to determine just where they stand in the program or if they have become one of the forgotten professionals.

Msgt John C. Snodgrass
Barstow, Calif.

The Uniform Shop
MARINE CORPS EXCHANGE
OPERATED BY
Jos. A. Wilner & Co.
Custom Tailors since 1897
Now your choice of a Wilner uniform individually tailored to your exact measurements . . . or complete selection in stock of ready-to-wear sizes. Fully approved regulation fabrics—tailored with the "know how" gained in serving Marine officers for three generations. Terms gladly extended. Mail orders promptly filled. Visit us or write for prices.
THE UNIFORM SHOP • MARINE CORPS EXCHANGE
Operated By JOS. A. WILNER & CO. Marine Corps Schools, Quantico, Va.



the 3 major NERVE CENTERS of the Mighty FORRESTAL

The U.S.S. FORRESTAL . . . 60,000-ton sea giant . . . the most powerful carrier afloat . . . owes much of its fighting efficiency to its modern sensory system . . . including its advanced-design communication and air navigation "nerve centers" developed by Federal Telecommunication Laboratories, a division of International Telephone and Telegraph Corporation.

To guide its planes safely home through darkness, fog, and stormy weather, the FORRESTAL utilizes Tacan . . . revolutionary new system that continually indicates position of moving ship to its fast-flying planes.

To keep in constant two-way voice contact with its pilots in the air, the FORRESTAL uses a new ultra high frequency radio system . . . with an effective range over one-and-one-half times greater than many previous systems . . . beaming its power through new-type antennas in new locations below the level of the flight deck.

For ship-to-ship and ship-to-shore communication the FORRESTAL's medium-and-high frequency radio system provides clear and dependable transmission for voice, teleprinter, high-speed code and facsimile.

The same electronic "nerve centers" will be installed on the new super carrier U.S.S. SARATOGA and other great aircraft carriers to come.

These vital developments . . . Tacan, UHF and MHF radio . . . are outstanding examples of IT&T's continuing contributions to electronic progress . . . to the growing might of America's defensive forces.

INTERNATIONAL TEL AND TEL

IT&T

INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION, 67 Broad Street, New York 4, N. Y.

Who Will Control?

. . . It is my belief and understanding that Marine Corps Aviation exists for the purpose of closely supporting Fleet Marine Forces. Following on that theme, I believe that in the helicopter we have a machine that will truly do the job. We have available to us an aircraft so versatile that we probably haven't gotten to the end of the list of all the things it could do.

Then we come to the question most frequently asked in the pages of the GAZETTE during the past few months. Who will control the helicopter?

It seems to me that a unit similar to the TACP (Tactical Air Control Party) used in close support missions would work — a control team especially organized to direct helicopter support missions from observation posts. They would operate like TACPs; in the Marine system, at division, at regiment and at battalion level. Each battalion commander has at hand an air liaison officer in addition to a forward air controller for advice. They would be available for advice on the use of the helicopter on a mission.

The Marine Corps began and developed close air support to a very high degree, through the co-operation of both aviation and ground. Can not the same be done with the helicopter?

SSGT, J. S. ECKERLE

Louisville, Ky

Wade Right In

. . . While LtCol Wade's be-bop terminology leaves much to be desired, his perspicacity relative to Schneider Peninsula (*Message Center*, January '56) is to be commended. However, as the instrument through which this apparently pernicious piece of real estate was conceived I wish to proffer the following in extenuation:

With but a few exceptions which I shall enumerate later, I am in complete accord with LtCol Wade insofar as the map (?) which appeared on page 26 of the November '55 GAZETTE. This appears to be an extremely inaccurate reproduction of a similar piece of terrain I developed for Maj Case, and while I am well versed in the prerogatives of artistic license I fear some of my 1461 colleagues have overstepped the bounds of propriety in applying such license to the machines of cartography.

The mean datum plane on the original Schneider Peninsula, which incidentally is a 10-foot wall-map, is indicated by a blue line with the water indicated by a light blue air-brush tone. This practice has long been in effect here at Training Aids, MCS, Quantico, and is accepted in the cartographic procedures of my ken. Since the Colonel chooses to accept the 50-meter contour and the mean datum plane as one and the same, he will surely agree that such acceptance places Cowtown and the Cowtown Airfield out in the middle of the bay. Keener observation coupled with meager tolerance would probably lead one to the conclusion that the mean datum plane had simply been omitted, no doubt a grevious oversight in higher cartographic circles.

I must bow to the Colonel's superior knowledge concerning the relative estheticism of the Y-shaped contour as opposed to the T-shaped, since in the years I have studied and subsequently taught map-reading I have never experienced this phenomenon. Too, I have no preference *or* tolerance for lines which *just peter out*. As for the *lover's leap topography* (quite romantic), I would point out two facts to the Colonel: one, this terrain was developed, per se, as a vehicle for propounding a theory in military tactics and not as a lesson in map-reading; and two, if the Colonel objects to the precipitiousness of this type terrain, I am sure he would not believe some of the actual terrain with which I have worked, notably that of some portions of Greece which make Schneider Peninsula appear in comparison as a rolling plain.

In conclusion and by amazing coincidence, my mother *was* scared by a pipe-fitter, though this phenomenon is evidenced by the knobbiness of my knees and *not* by my lack of ability as a cartographer in this instance.

MSGT WILLIAM A. SCHNEIDER, JR.

MCS, Quantico

Index

. . . The availability of loose-leaf binders for the GAZETTE (at reasonable cost) has probably caused the magazine to not only be read, but re-read by more subscribers than ever before. For that reason an index, such as that included in the 1954 volume, is practically a requirement.

Perhaps an index could be included in a future edition which could be removeable (like the Squads Right series) in order to append to the December 1955 GAZETTE.

CAPT. P. A. WICKWIRE

Annapolis, Md.

ED: *A limited supply of the consolidated index sheets for 1955 is available. These will be sent to readers for use with the binders on request. Address request c/o Business Manager.*

THE NAVY MUTUAL AID ASSOCIATION

Announces!

★ **THREE NEW PLANS OF INSURANCE:**

- Paid-up at age 50
- Paid-up at age 55
- New, low cost Ordinary Life

★ **AGE LIMIT INCREASED FROM 45 TO 62 YEARS**

- Practically all officers serving on active duty now eligible for membership

★ **WAIVER OF PHYSICAL EXAMINATIONS**

- Applicants 40 years of age and under not required to submit report of physical examination

Benefits in Force	**$100,000,000**
Assets	**$ 29,000,000**
Total Payments to Beneficiaries	**$ 23,000,000**

Write for Details to

The NAVY MUTUAL AID ASSOCIATION

NAVY DEPARTMENT, WASHINGTON 25, D. C.

Dilemma Is Not Semi

. . . I have read Maj Reber's splendid article in the December GAZETTE on *Communications — Our Semidilemma.* He is to be congratulated upon putting the problem in such a clear light. However, is the Marine Corps due any congratulations for making such an article necessary? Definitely no!

I could (and do) say — *Here's where I came in.* Having spent a few years in the signal business, I know how the Major feels. With the exception of postwar terminology, this article could have been written in the '30s. I believe such articles did appear in some service magazines of those years.

We communicators of the '30s and early '40s had an uphill fight to have our art recognized by the commanders. It was a tough battle and not a popular one. We were often referred to by a 3-letter title similar to the one used by true Georgians when referring to Gen Sherman's forces.

I wonder how many tough, well-rounded, qualified 0302 field officers have read the Reber article. I'll wager too many of them saw the title and said to themselves — *Another Communicator is loose again.*

Let's have some more articles like Maj Reber's. Here is the communicators's chance to sound off for money. When the 0302s, 0802s and other combatant commanders realize your problems, they will begin to help to get your job done.

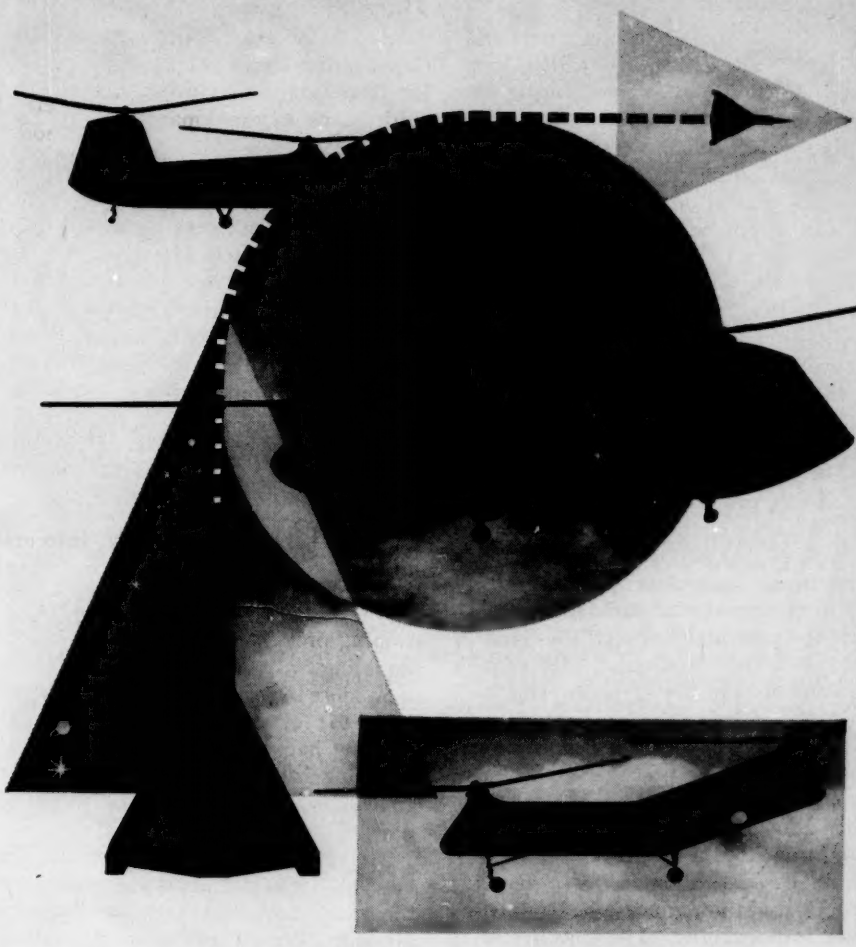
BRIGGEN J. P. BERKELEY
Washington, DC

Monster Problem

. . . Comments on two articles in the January issue. First, concerning *The Monster* let me say that having been in tanks for a considerable period, I feel tracked vehicles have their definite place. However, I believe Maj Cass has described the maintenance problem in a too rosy glow. He states that this problem is one primarily of preventive maintenance. Yes, PM stops many breakdowns, but they still happen. Then you need the trained mechanics with the proper equipment.

Second, is *Supply and Demand* — a good picture of the 2-year supply detail. I was in the first class picked for this detail. My first thoughts and comments were not the best about going. But it was not too long before I was relating the instruction back to the problems I had had as a company CO and wishing that I had known the reasons and answers then. I don't believe anyone ordered to this tour of duty will feel bad after once realizing how important supply and fiscal matters are today.

CAPT C. C. BUCKLEY
Memphis, Tenn.



NEW SHAPES of things to come from Piasecki . . .

Startling new flight concepts are taking shape on the drawing boards—in the test cells—of the Piasecki Research and Development Division.

New airfoils, new control devices, new lift configurations—these are the building blocks of future Piasecki developments.

Looking to the immediate future, progress has already been made in Vertical Takeoff aircraft. New and improved helicopter designs—projections of Piasecki's long research and engineering experience in high performance helicopter design and production—are nearing the flight stage.

Today, many different models of Piasecki helicopters are flying for the three Armed Services . . . everywhere . . . doing dozens of difficult jobs. Tomorrow, the shape of Piasecki aircraft to come will be a vital part of our Defense picture, our air transport scene.

In the future, as today, Piasecki will design and build aircraft for performance, for versatility—*for the toughest jobs.*

ENGINEERS NEEDED FOR: DESIGN • AERODYNAMICS
TESTING • STRESS ANALYSIS • AIRFRAMES

Send resume to John Tannone, Jr., Employment Representative

Piasecki HELICOPTER CORP.
MORTON, PENNSYLVANIA

Flying Bunker?

. . . I have read the many letters and articles about helicopters which have been published in GAZETTE during the past few months.

It appears to me that too much emphasis and thinking has been placed on who will control and very little, if any, on the troops who must ride in the helicopters.

Regardless of who (air or ground) controls the 'copter officially, when the 'copter comes under fire the tactical prerequisite will be in landing the troops in the proper place, at the proper time *in a condition under which they can effectively carry out their mission.*

The helicopters now in use offer little, if any, protection to the men riding in the cargo compartment. Therefore, it appears that before we can effectively land troops we must redesign the 'copter to give protection sufficient to insure that the percentage of men who land in a combat-ready condition is high enough to condone the use of helicopters.

Why not design the 'copter with a detachable steel pod. The 'copter could land, detach the pod, and leave with great speed. The pod could have firing slits allowing the troops to fire while landing. Possibly a free machine gun could be used. Under this system the troops could be landed and retain their unit responsibility. The time factor in landing and setting up would be less. Of course, they would have to redeploy from the pod, but they would be able to deploy while putting out a little fire from the pod. Also, this system should give the aviators a considerably longer life expectancy in combat because they would spend less time under fire.

I realize that there are many difficulties involved in an idea such as this. One difficulty would be the weight involved, but if this idea has merit there are undoubtedly men with the technical knowledge to implement this idea.

1stLt R. M. BARTLETT

Camp Pendleton, Calif.

Tank-Infantry-Blanks

. . . Capt R. J. Norton in his *The Infantry-Tank Team* (Jan56) states each infantry regiment has organic to its ATCo one platoon of 5 medium gun tanks with the primary mission of destroying enemy armor. Revision No 1, T/O L-1073, ATCo, InfRegt, MarDiv, FMF, of 12Sep55 calls for 3 ATPlts with each platoon consisting of a PltHq and 4 *Ontos* AT Squads. The ATCo no longer calls for medium gun tanks but retains the same primary mission—to provide antitank protection for the infantry regiment.

TSgt R. J. SOUTHALL

Quantico, Va.

No Layman's Approach

. . . The basic complaint registered by Capt Haslam seems to be that the policy for developing *individual* marksmanship ability fails to develop *combat* marksmanship ability.

I disagree with him. The basic policy guidance contained in paragraph 24350, Volume I, *Marine Corps Manual* 1949 is sound and completely adequate.

Unfortunately, most Marines never have an opportunity to complete the full cycle of prescribed training. They finish annual marksmanship training on record day, completing phase one of the 4-phase program.

And the mere existence of an approved Marine Corps Combat Marksmanship Course, complete with noisemakers, smoke-emitting devices and electronic pop-up targets isn't going to correct things, either.

We need reorientation in our unit training programs. The present Liberal (dabbling in the military) Arts type program does not allow enough practical work to force development of good shooting habits.

Criticism of the positions used in known-distance firing is only partly justified.

To my mind, the requirement for basic ability before attempting to master the more advanced aspects of marksmanship — range and wind estimation, etc—more than justifies annual known-distance training prescribing use of arbitrary positions.

However, I do not believe that the stipulations of paragraph 24421, Volume I, *Marine Corps Manual* 1949, were ever intended to apply to qualification training. On that score, we need a firm policy decision from the Commandant. I favor the attitude "all's fair in love and war" and elimination of petty stipulations on the position of the ankles, height of the toe of the stock above the ground in the prone position, and whether the extended arm in offhand rests against the body or not.

1stLt C. H. STRANDBERG

Quantico, Va.

. . . As a Rifle Marksmanship instructor at The Infantry School, Fort Benning, Georgia, I thoroughly enjoyed and agreed with Capt Haslam's article in your December issue entitled *Our Shooting Positions—Unrealistic.* I also believe that the soldier (and Marine) must be taught to shoot and hit targets without all the *score boosters* and help which he now receives on the flat, almost comfortable known distance ranges. Perhaps to add a little fuel to Capt Haslam's article, I might tell him that the Army is now troop testing a phase of marksmanship training called *Trainfire* whereby the troops are tested on their individual ability to not only hit targets in the field, but to detect them also. Perhaps the services are now on their way to training combat qualified shooters. The above opinion is my own and does not reflect the opinion of The Infantry School.

1st Lt D. E. ROSENBLUM, USA

Fort Benning, Ga

We Pass

. . . First of all, let me say I have enjoyed the GAZETTE for several years and find its informative articles a pleasure to read.

It is with a realization that time operates against the staff of a periodical, and that technical libraries are not as available as they are to the specialist-rifleman or flight equipment man, that the following comments are made.

Bureau Aeronautics Aviation Clothing and Survival Equipment Bulletin 24-54 (CASE 24-54 for short) has the bail-out cylinder in the seat cushion—not on the pilot's leg as sketched on page 6, GAZETTE, Jan 56.

The pilot in *Nose Dive!* is wearing an incorrect mask—the A14 diluter demand instead of the A13A positive pressure diluter demand—for the type regulator in an FJ2. FJ2s, reference AN01-60JKB-1, Flight Handbook, carry a positive pressure diluter demand regulator.

NavAer 03-50-517, pg 1, states: ". . . the substitution of A14 (diluter demand) masks for A13 (positive pressure) is not permissible."

Air Force T.O. 15X-1-1 (03-50-1) agrees.

The importance of correct mask-regulator use is illustrated in Naval Aviation Safety Bulletin March 1955, pg 12. Although the example presented mainly shows the results of lack of training, the passenger (possibly a line company man on emergency leave) assumed because the mask fit the regulator, it was the correct one. My point is that by using the wrong mask in the picture we compound the error. I think it's an error most anyone not a pilot could make.

Aircraft are going higher, infantry observers as well as countless other non-pilots are flying and will fly, and they must be aware of the hazards involved and the need for training. We can do this through the GAZETTE.

Note the use of the term *hypoxia* in place of *anoxia* in the Safety Bulletin on the Air Force T.O. Anoxia means *without oxygen;* it is giving way to the more correct term, *hypoxia,* the condition of having less than the required amount of oxygen.

TSgt J. F. MAHER

El Toro, Calif.

For the Record

. . . I am still in the process of reading the January 1956 issue of the GAZETTE but wanted to take time out to comment simultaneously on 3 excellent articles which I think are interrelated: *Discipline Has No MOS* by Maj Stubbs, *Jack Em Up!* by Maj Averill and *SRB Marks—Staff NCO* by Capt Galbraith. In my view the 3 articles are complementary for they talk about problems which all unit leaders face in the handling of men.

I would take particular exception to some of the general train of thought expressed in Capt Galbraith's article concerning service record book marking of Staff NCOs, although seconding him on some specifics. In the agreement column I think his suggestions are valid which point toward a method of recording which might forward to HQMC, to a man's permanent file, his individual conduct and proficiency markings from a given duty station, so that these would not be used as a *crutch* to assist a later marking officer.

In my opinion the problem goes much deeper and suggests the need for the review and retraining of all officers in the background and technique of a service record book marking. Although it is a difficult job to sit down with a man on a face-to-face basis pointing out his inadequacies and suggesting means of improvement, herein lies the means of promoting a betterment of the Corps (as so well commented on in Maj Averill's article *Jack 'Em Up!*) We would not only have a more realistic permanent record on both officers and Staff NCOs if marking superiors *honestly* rated those in their commands, but we could at the same time set the framework for an excellent down-to-earth evaluation of each man's accomplishments — an innovation which would be in the best interests of the Corps.

CAPT. R. B. VAWTER
Cleveland, Ohio

. . . The ideas suggested by Capt T. H. Galbraith (SRB Marks — Staff NCOs) are, in my opinion, rational and sound.

One of the many reasons an officer may be reluctant to mark a Staff NCO low is that his record book is available to office personnel, and a more sweeping means of communication than the company clerk has yet to be hatched.

At the time a man is promoted to Staff Sergeant, page 3 could be removed from his SRB and forwarded to HQMC for file in his jacket, thereby creating one more distinct and visible step toward NCO prestige.

CAPT W. S. CLANCY
San Francisco, Calif.

"FLYING BARREL"
A research contract on ring-wing type aircraft has recently been awarded to Kaman Aircraft by the Office of Naval Research. Also known as an annular-wing, it has been dubbed the "flying barrel". This marks another important step in Kaman's ten year history of specia' aeronautical research . . . in addition to production of Kaman helicopters for National Defense.
KAMAN
THE KAMAN AIRCRAFT CORP.
BLOOMFIELD, CONN.

Established 1918

A. M. Bolognese & Sons

TAILOR AND HABERDASHER, QUANTICO, VIRGINIA

CUSTOMER'S ORDER BLANK

Name _____

Address _____

_____

Articles Desired _____

Special Fitting Problems _____

Fill all blanks below:

Height _____ Pants Inseam _____ Seat _____ Cap _____

Weight _____ Neck _____ Sleeve _____ (outseam) Glove _____

Waist _____ Chest _____ Shoe _____

SPECIALIZING IN CIVILIAN & MILITARY EVENING CLOTHES COMPLETE WITH ACCESSORIES—INSIGNIA & ORNAMENTS OF ALL DESCRIPTIONS

Order now your Summer Service uniforms for delivery in the spring:
Gabardine Coat or Jacket $55 Trousers $25 Shirts $9

Winter Service uniforms for immediate delivery:
Jacket & Pants $85 Coat & Pants $95 Topcoat $85
Campaign Hats: Officer $10 Enl. $7.50 (Add $2 for packing & Postage)
Engraved Swagger Sticks: Officer $10.95 NCO $6.95
Engraved Calling Cards with Plate: Officers $12 Wives $8
Approved Swords for immediate delivery—Complete $85

introducing

MAJ MALONEY

Major E. S. Maloney has an understandable interest in the type of training being given our enlisted aviation personnel—he is in his 13th year of flying planes serviced by the men who graduate from the *Aviation Boot Camp* he writes about on page 12. He entered the Marine Corps in 1942 through the V-5 program and during WWII had the unenviable distinction of having a carrier shot out from under him. He was flying a mission off the USS *Franklin* in 1945 when the "Big Ben" was bombed. Luckily he made it to the USS *Hancock* and was waved in to a safe landing. Major Maloney flew again in combat with VMF 214 and VMA 212 in Korea and since July 1954 has been Training Officer (OIC) of the Airman School, NATTC, Jacksonville, Fla.

"GUERRILLA WARFARE," page 26, is the text of a lecture delivered before members of the Marine Corps Association at Quantico by **Mr. Gene Z. Hanrahan.** Mr. Hanrahan's lecture was the fourth in a series of 8 to be presented by the Association. Currently a consultant on political-military problems for the Weapons Systems Evaluation Group of the Joint Chiefs of Staff, Mr. Hanrahan has been active in recent years working on various problems concerning guerrilla warfare for Special Forces, Office of the Chief of Psychological Warfare, DOA. He served in the Marine Corps in China and in the Pacific during WW II. He has been a consultant to a number of Government and private organizations on Asian political-military affairs and is the author of a number of books and articles including: *The Communist Struggle in Malaya* (1954), *Chinese Communist Guerrilla Tactics* (1952) and has a book coming out shortly on the Chinese Red Army.

MR. HANRAHAN

IT'S **LtCol C. E. Warren's** JOB, AS Combat Services Support Officer, Logistics Section of the Tactics and Techniques Board, Marine Corps Development Center, to weigh ideas and methods of perfecting logistic support for the Marine division. Through personal experience and observation he has come to the conclusion that the logistics elements of the division are not properly organized for modern amphibious operations. His solution — *Reorganize the Service Regt* may be found on page 36. Commissioned in 1940, LtCol Warren served in the Logistics Section of the V Phib Corps during WWII, was Logistics Instructor and Chief of Section at TTU Pac from 1949 to 1952. In Korea he was commanding officer of the 1st Service Bn before taking over as CO of the 1st Battalion, 1st Marines.

A VERSATILE AUTHOR AS WELL AS officer, **Col F. P. Henderson** bends his efforts this month towards chroniclizing a facet of WWII that has received little attention from military historians thus far — *NGF Support in the Solomons.* Part I, *Guadalcanal,* will be found on page 44. Col Henderson, who should need no introduction to regular readers of the GAZETTE, has been an ardent and enthusiastic artillery advocate in the Marine Corps for more than 20 years and at the present time he is a Member of the Advanced Research Group of Marine Corps Development Center, Quantico, Virginia.

COL HENDERSON

OTHER AUTHORS WHOSE BIOGRAPHIES have appeared in these pages previously are **LtCol H. J. Woessner, Capt C. B. Haslam** and **Capt W. J. Davis.** Lieutenant Colonel Woessner recently left Quantico to join the Staff at the Naval Academy and his article *Target Acquisition,* which covers a vital subject for future operations appears on page 40. Captain Haslam, who is a Test Officer for the Marine Corps Equipment Board, brings us *New Developments — Ordnance* on page 32 — an insight into some new developments that should lighten the load of the infantryman. Captain Davis, who recently expounded his theories to the students at Basic School as well as to readers of the GAZETTE (and who is now a student of the next higher educational echelon, Junior School) offers *Hail to the BARman* on page 17, a plea to put more emphasis on selecting and training the most important man in the Marine Corps fire team.

SOMEWHERE BETWEEN JAPAN AND the West Coast (if you ignore the Great Circle Route) you will find **Capt R. L. Johnson** serving with some element of the 3d Mar Div. The subject of his article on page 20, *Background on Formosa,* also lies within the general confines of his duty area. Captain Johnson enlisted in the Marine Corps in 1942 and was commissioned through the PCC in 1945. During WW II he served at Guam and in China and was released to inactive duty in 1946. Recalled in 1951, he served with Recon Co in Korea in '51-'52 and then went to the 2d Inf Tr Regt. Prior to leaving for the 3d Mar Div he was stationed at HQMC.

CAPT JOHNSON

Captain B. J. Hill, WHO IS NOW THE S2 of the 6th Marines has attended the Turkish Language Course of the Naval Intelligence School, NRS, Washington, DC and he also went through the Army Intelligence School at Ft. Riley. But he feels he was qualified to write *The Marine Corps Has a Mortar* on the basis of his experience as CO of the 4.2 Mortar Co, 6th Marines at Camp Lejeune. Captain Hill enlisted in the Marine Corps in 1940, was commissioned in 1952 and was graduated with the 13th SBC. He served with the 1st MAW in Korea prior to going to Basic School.

AS AN INSTRUCTOR IN THE OPERAtions Instruction Section of Senior School, **LtCol E. P. Dupras** felt that it would be enlightening to summarize all the lighting means available to commanders in combat. His *Let There Be Light* on page 56, it seems, covers the field very well. He was commissioned in 1941 and subsequently served as a platoon leader and company commander with the 1st Raider Bn, as a battalion commander at OCS in Quantico and as a recruiting officer in Portland, Oregon. He was S3 of the 2d Bn, 8th Marines in 1946 and then attended the Advanced Infantry School at Fort Benning. From 1948 to 1951 he was an instructor at TTU Pac and then became Fleet Marine Officer of the Seventh and First Fleets of the Pacific Fleet. He attended Senior School before becoming an instructor.

LTCOL DUPRAS

IN THE PALM OF HIS HAND

. . . a complete military transmitting and receiving station weighing about one pound!

RCA Ultra-Miniature FM Transceiver compared with AN/PRC-10 (Walkie-Talkie)

The "battle maneuvers" illustrated above disclose a new dimension in military communication, made possible by modern transistor developments.

In his hand the officer holds an RCA Transceiver, a complete radio transmitting and receiving unit—the smallest 2-way FM radio ever built. The entire walkie-talkie is only 6" x 3" x 1⅛" in size, with weight, including battery and all accessories, of about 20 ounces.

The men in the field listen to "battle instructions" over tiny receiver units built inside their helmets.

With a range of about a quarter mile, the RCA Transceiver can be pre-set for any frequency between 45 and 52 mcs. Only two controls are used and no tuning or adjustment is necessary during normal use. The receiver is an all-transistorized superheterodyne and the transmitter comprises two transistors and one tube, both contained in a single unit.

The feather-lightness and miniature size of the transceiver and receiver make it possible, for the first time, to extend communication to the individual level. It is another instance of RCA's constant search for new and better ways of doing things electronically. Demonstration and consultation with RCA field engineers throughout the world are invited. Call or write.

TYPICAL MILITARY APPLICATIONS

- Tactical communications between squad and platoon leaders and higher, also with individual soldier or marine
- Military police and sentry duty
- Air and sea rescue (unit in survival kits)
- Guided missile installations (before and after take-off)
- Communications between maintenance crews, fire crews and between crew and control tower

Medical work (litter bearers to field hospitals) *. . . and hundreds of others.*

DEFENSE ELECTRONIC PRODUCTS

RADIO CORPORATION of AMERICA

CAMDEN, N. J.

AVIATION BOOT CAMP

By Maj E. S. Maloney

BOOT CAMPS ARE SET UP TO TAKE a civilian and pound into him the basic knowledge and proficiency that will allow him to survive, temporarily, in the service. After giving the recruit this fundamental scientific knowledge they select and assign him to a certain functional field.

Everyone in the Marine Corps has heard of our two Boot Camps and most all of the enlisted men have been through one or the other. But now, in the last 5 years, a third one has cropped up that not too many people know much about. It is a Boot Camp where all of the Marines coming into aviation are being sent immediately after getting their combat training. This Aviation Boot Camp is in no way a duplication of the Recruit Depots, unless you would want to consider the military discipline a repeat course.

With aviation becoming so technical and the need for specialists becoming greater every year, it is only natural that this school came about. With enormous sums of money riding with every plane in the form of special type weapons, it is imperative that the right men are picked for the right job in maintaining and controlling that aircraft. Selecting that right man is one of the objectives of this third Boot Camp.

Since 1951 more than 22,000 Marines have gone through the school. With such a large alumni spread around Marine Aviation, lower rated men should know all about the school, but there are still many staff NCOs and officers who do not know what the school's mission is.

This Aviation Boot Camp is formally called Airmen School (Class P); the "P" standing for preparatory school for airmen recruits. The Airmen School was formally named in March of 1950; before that it was called the Aviation Fundamentals (Class P) School. The Airmen School at this time was located at Naval Air Technical Training Center, Memphis. With the outbreak of the war in Korea, the technical schools were enlarged within the Naval Technical Training Command which necessitated the Airmen School to move to Jacksonville, Florida. Then in the spring of 1952, the trainee load was so large another "P" School was opened at Norman, Oklahoma.

With the two "P" Schools there became a separation of training caused by sending the Naval personnel to Norman, Oklahoma and the Marine personnel to Jacksonville, Florida. By May 1953 the last sailor graduated at Jacksonville, and from that time on there have been only Marines and Waves attending the "P" School in Florida. Waves were retained because of the unavailability of quarters at Norman, Oklahoma. In July of '54 the "P" School at Jacksonville was completely manned and staffed by Marine officers and instructors to make it a homogeneous unit. The School is under the operational control of the Naval Technical Training Center, but comes under the administrative personnel control of the Commandant of the Marine Corps.

Although the School is under the technical control of the Navy for the proper administration and policies; the fact that it is staffed by Marine personnel from the training officer to the police sergeants make it almost a Marine school. The traditional esprit de corps and military discipline is maintained with the motto "First a Marine."

The length of the course is 8 weeks with a new class starting every Monday, and the eighth-week class graduating on Friday. The input at present is 110 Marines a week for an on-board count of nearly 900 students.

To instruct and control that student load the table of organization calls for 7 officers, 102 instructors, 19 support and 15 liaison personnel. The training officer and assistant training officer are both aviators; the other 15 officers are aviation ground officers in the engineering field. The instructors are all Staff NCOs with an aviation MOS. There

At our third Boot Camp we make sure that the right man is picke

are 10 infantry troop handlers to control the men when not in the classroom.

The mission and curriculum for the School is approved by Chief of Naval Air Technical Training and Chief of Naval Operations. The mission has 4 objectives and it is accomplished as follows:

First Objective

. . . to provide non-rated personnel with knowledge and skills basic to Naval Aviation in order to prepare trainees for entrance to Class "A" schools.

This objective is accomplished in two phases of operations within the course; one an academic phase, the other a performance phase. In these phases they are given academic knowledge and practical work, common to most aviation ratings.

In the academic phase a trainee receives 100 hours of instruction in mathematics, physics and layout. The instruction covered in this phase starts with the elementary and proceeds to about tenth grade school level. In math a trainee receives 40 hours of fundamental instruction in arithmetic, algebra, ratio and proportion and geometry. In the Physics Unit, a Marine receives 30 hours on the fundamentals of mechanical and electrical physics. The Layout Unit is 30 hours in duration consisting of how to make and read blueprints and drawing.

In the performance hand tools phase a trainee gets to use his hands and the more common tools in the aviation ratings. A total of 76 hours is devoted to this phase in which the trainee makes various projects. Knowledge gained in the academic phase is put to use in this phase in making some of the projects. For example, in making the DZUS key, the work has to be scribed or laid out on a raw piece of metal before it is cut by hand with a hacksaw. The project is then filed so it will have smooth edges and a sharp tang. Other projects and benefits derived are the stud block where a student learns how to square a piece of metal and drill holes into it, thread the holes, cut a metal rod to various lengths, thread the small rods and fit them into the block to various depths. A wire cube is made to teach them how to solder. An "I" beam is made to acquaint them with riveting, different methods of safety wiring are practiced on a cylinder and a carburetor and a piece of aluminum is formed into a trough to practice metal forming. All the projects are graded for accuracy in dimensions, neatness and quality of work. The grades of the academic and performance phase are of value to the counselors in selecting the men for future "A" schools. In these phases it can be determined whether a man is better with his head or with his hands.

Second Objective

. . . to provide non-rated personnel with information and practical factors that are necessary to complete the qualifications for a Marine airman.

This is the practical phase of the School through which every trainee is sent whether he graduates, fails, or is dropped at the middle of the course. This phase gives the trainee the basic knowledge in a practical demonstration or application on how to stay alive when working around aircraft. This phase is divided into 4 units called Aircraft Familiarization, Gunnery, Fire Fighting and Survival.

In Aircraft Familiarization a trainee receives 47 hours in Naval

or the right job to maintain our aircraft

Air Organization, Theory of Flight, Naval Aircraft Designation, Recognition, Safety Precautions and Line Procedures. In Line Procedures they spot and secure aircraft, have fueling and defueling demonstrations and learn how to start an aircraft. Each student starts, turns up and stops one of the 9 aircraft attached to the School.

The Gunnery Unit is a small unit where the trainees learn all about the .50 caliber aircraft machine gun. They learn how to field strip it, belt ammunition and fire 15 rounds on a range.

In Fire Fighting, the trainees learn about fire and its control. The different size and type fire extinguishers are explained, demonstrated and applied. Once a week a class is taken out to a fire mat for a full day where they put out different-size fires and an actual aircraft fire with foam and water.

Survival is the last unit in this phase, where they learn survival techniques for themselves and the aircrewmen. All safety and survival gear in an aircraft, such as Mae West, safety belt, shoulder harness, para-raft and oxygen are covered thoroughly. For their own survival, how to live in a raft on the sea, in the arctic and tropical zones are also included.

A total of 76 hours is spent in this phase with most of it in practical application. A trainee completing this phase would be of some benefit to a squadron if it only meant staying alive on the line.

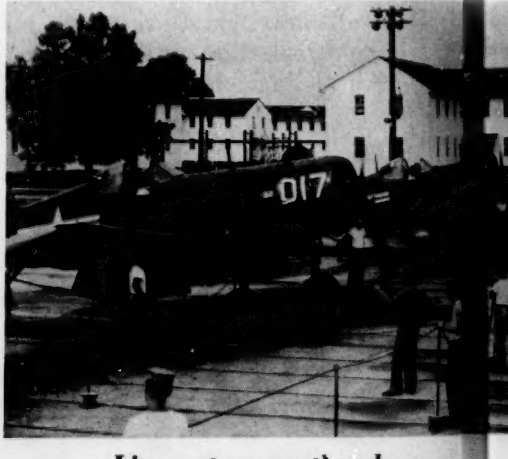
Layout — make and read blueprints and drawings

Third Objective

. . . to provide non-rated personnel with general knowledge of each aviation rating in order that the trainees may choose a specialty in which they are interested, and for which they are qualified.

This phase is set up with 12 aviation rating shops: Aerographer (AG), Air Controlman (AC), Aviation Boatswain (AB), Electrician (AE), Electronics (AT), Mechanics (AD), Metalsmith (AM), Ordnance (AO), Parachute Rigger (PR), Photographer (PH), Supply (AK) and Training Devices (TD).

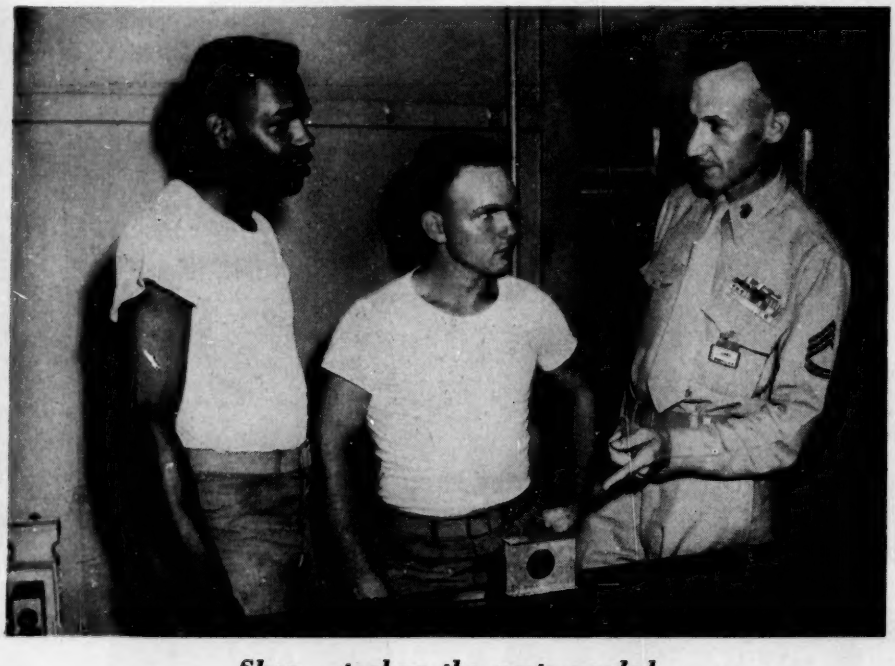
In these shops, they are given an explanation of duties and general information concerning each rating and, where possible, equipment is demonstrated and used. Thus, the trainee is better prepared to choose a rating in which he is interested and for which he can qualify.



Line — tune-up the planes . . . . .

The Rating Shops are designed to show, as far as possible, actual equipment and procedures typical of the rating involved as well as the necessary qualifications, duties and advantages and disadvantages of the rating.

In order to provide time in which to think about the various ratings, schedules are arranged so that the trainee spends one hour in each Rating Shop early in the course of instruction. It is during this first hour of instruction that the trainee is told about the duties and the qualifica-



Shop — tool-up the parts needed

tions essential to success in the rating, any physical requirements particularly required, and what he will be expected to know in the Class "A" School.

Later in the course, trainees return to the Rating Shops, during which time equipment peculiar to the ratings is explained and demonstrated. Whenever possible, the trainees actually use the equipment.

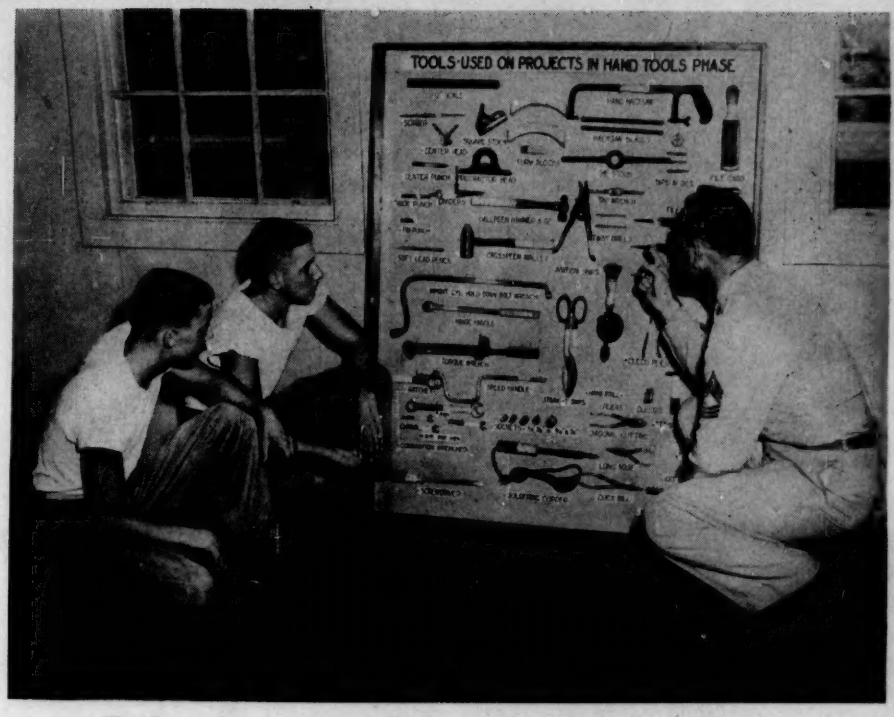
Fourth Objective

. . . to provide the non-rated personnel with proper counsel and assignment to class "A" schools in accordance with the needs of the service and the ability and adaptability of the individual.

This is an important aspect of the school for this is where the round peg is put into the round hole. During the seventh week of school, each trainee is scheduled for an interview with one of 4 counselors who are specailized in the field of guidance. These interviews are scheduled for 30 minutes, but often time, depending on the complexity of the case,

. . . . . while under instruction

may last an hour. The counselors are supplied with as much information concerning the trainees as can be gathered during the first 7 weeks of school. Together, with that information and the opinion arrived at during the interview, they make a recommended assignment. The selection criteria used by the counselors in making these assignments are: 1) physical characteristics or qualifications necessary; 2) individual's desire; 3) school grades; 4) basic battery test scores; 5) obligatory service; 6) previous education; 7) environment (home and locality); 8) needs of the service.



Tools — learn nomenclature and practical application

The counselors have to determine during the interview the most important thing in assignment, and that is how well is the man motivated for a particular field. In order to help him the trainee has submitted 3 choice sheets at various intervals in the course. These choice sheets show the man's desires as to a future school or field. The first choice sheet is filled out the first day of school, the second after the man has had one hour in each rate shop, and the third after he has had 5 hours in each rate shop. Not all get what they desire, due to the limited quotas to the "A" schools and in cases like that they usually end up with their second or third choice.

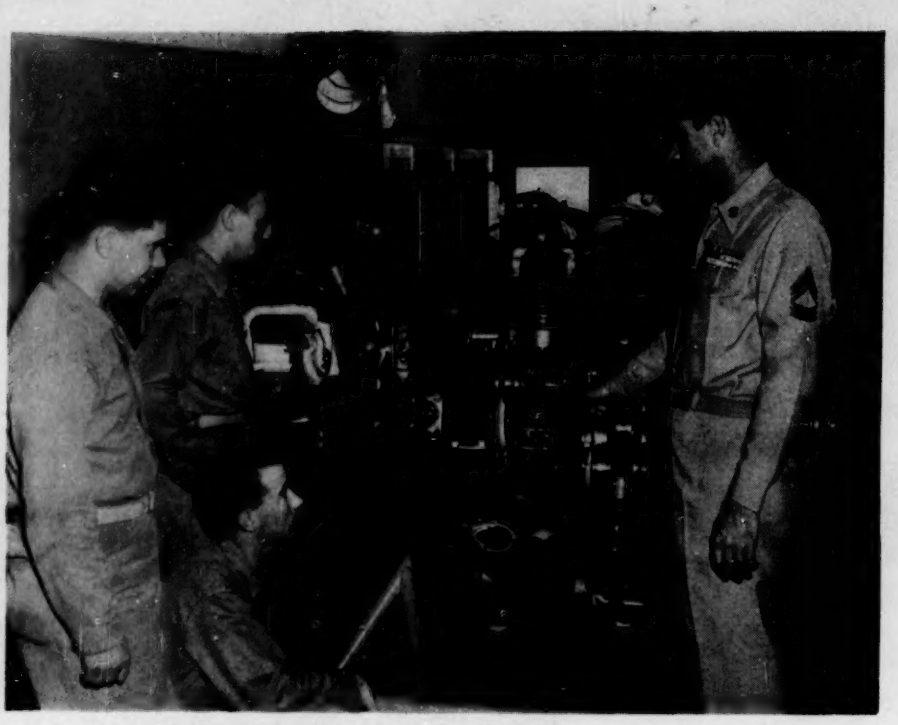
If a trainee fails or barely passes, in which case he might not be good "A" school material, he is sent direct to the Marine air bases. These men are usually of the lower caliber and end up as strikers for the tour of their enlistment.

Benefits Derived from the "P" School

Most of the benefiets derived from the school are of mutual benefit to the individual and to the service. Besides receiving a Marine who is well rounded on the fundamentals of aviation, the service ends up with a man of more quality.

His efficiency is increased since he is assigned to a field in which he is

Conditioning — build up the competitive spirit



Mechanics — look into the heart of the engine

Emergencies — cope with the unexpected

Counseling — fit the right man to the job

really interested. This makes the work easier for him and his supervisors. With an increase in efficiency the man's morale is increased and the commanding officer's discipline problems decrease. His efficiency effects his promotions, thus again his morale is considered. If a man's promotions and morale increase at a steady rate he is a prospect for a re-enlistment. If he does re-enlist the government saves money by not having to train a new man.

The Aviation Boot Camp is a weeding-out place for the personnel not capable of passing an "A" School. By tabbing and cutting out these lower caliber men at their first step of technical training, it saves the government time and money by having smaller and shorter "A" Schools. Besides weeding out people of lower mentality, it cuts out people with chronic disciplinary problems, thus allowing the staff of the "A" Schools to devote valuable time in technical training and less time to sitting on courts.

The Marines get 18 more weeks of military training which is stricter than they will get in the "A" Schools and still a little less than they got at the Recruit Depots. The fact that the School is staffed by all Marine personnel helps this tremendously.

A man going to a squadron from "P" School is going to be of some use, even if it's just as a striker, for a plane captain. Since he has had the fundamentals of the line taught to him, he will, at least, know enough to keep the Leading Chiefs from getting gray hair worrying about his safety.

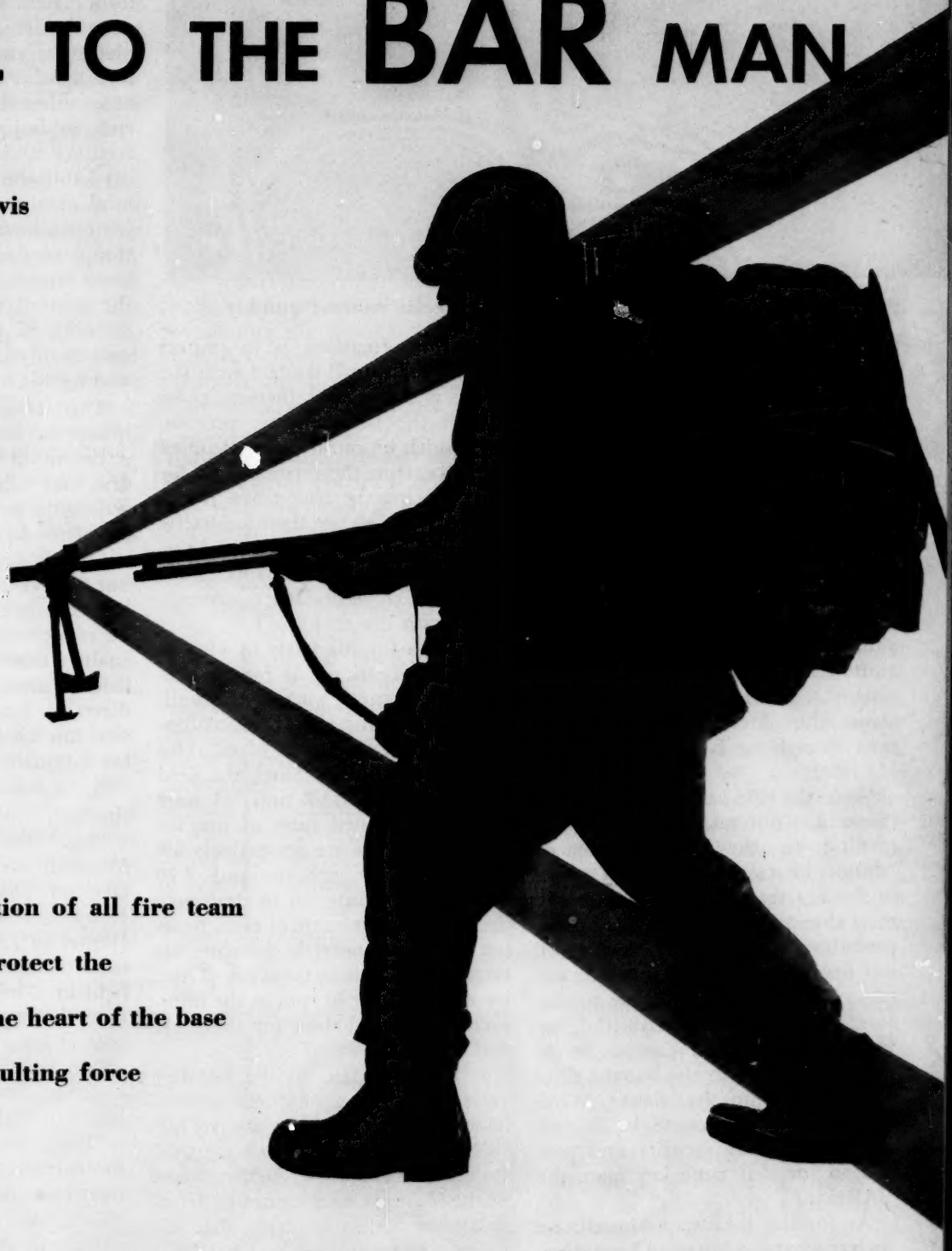
The school is of benefit to the instructors since it develops their understanding in human relations. With a turnover of 900 Marines every 2 months they have opportunities to meet and study all types of Marines. To further this understanding, there is an instructor assigned to each group of 12 men to act as their advisor in academic, personal or professional problems.

All in all the school is paying off for everyone concerned and it is hoped that this article has served the purpose of informing people of the school, which like another small spoke plays an important part in adding strength to the big wheel.

USMC

HAIL TO THE BAR MAN

By Capt W. J. Davis



The primary function of all fire team formations is to protect the BARman — he is the heart of the base of fire for the assaulting force

YOU KNOW, AS WELL AS I, IF you'll think about it, that the heart of the Marine Corps is not the M1 lugger, but the man who carries the greatest all-around weapon available to the infantryman — the Browning Automatic Rifle.

Before we even consider how this weapon has mechanically aided the cause of the Corps during WW II, various "Banana Wars" and one pretty good-sized "police action," let's look at the basic triangular organization of our Fleet Marine Forces. (And it will be the same if we adopt the quadrangular organization.) As we all know, our fighting organizations are built around that smallest of maneuver elements, the fire team. And the heart of the fire team is the BAR.

Think of the primary duties of the 4 men of the fire team as officially outlined in *The Marine Rifle Squad* (NAVMC 1046-DPP). In effect, it implies that all 4 men are working towards one common goal — to place well-aimed BAR fire on the enemy, whether the fire team be in the actual assault of the enemy position or in the base of fire which assists, or makes possible, the final assault.

For example, in speaking of the responsibilities of the fire team leader to his squad leader and to his men, the "book" states that the fire team leader "takes position where he can best carry out the orders of

Close enough to the BARman to exercise control quickly

the squad leader and observe and control the fire team, normally close enough to the automatic rifleman to enable him to exercise control of the automatic rifle quickly and effectively." Thus, in essence, we can quickly and effectively see that the primary mission of the fire team leader is to control the fire of his BAR.

In sequence, the assistant automatic rifleman "is responsible to the fire team leader for assisting the automatic rifleman in keeping the automatic rifle in action *at all times*. . . ." Is there any question about that Marine's basic duties, even though he is armed with the M1 rifle?

Next, the rifleman, who "serves as rifleman, scout and grenadier," according to the same reference, "should be employed at that place in the fire team formation which is most threatened by enemy action or probable enemy action." In effect, if our fire team is moving towards the enemy, the rifleman will be to the fore; if we are temporarily withdrawing, he is at the rear; if we are on an exposed flank, who else but the rifleman will be on that flank? Why? Well, basically because he is primarily providing security and protection for that same key man, the BARman!

As for the BARman himself, no matter what the fire team formation, be it column, wedge, skirmishers or echelon, he is normally the interior man within all of these formations. He usually is in between the fire team leader and his assistant automatic rifleman . . . "where he can quickly deliver effective fire on the enemy as ordered by the fire team leader, and receive the help and protection of the assistant automatic rifleman."

Thus, there can be no question but that the primary function of all fire team formations is to protect the BARman until contact with the enemy is made, and then to place him in the best possible position from which he can bring well-aimed fire to bear on those troops. As for those Marines bearing rifles, it can be seen that they are there primarily to effect these aforementioned functions in the role of assistants to the BARman and secondarily as enemy-killers with the trusty M1.

So much for the heart of Marine Corps organization. As for the mechanics of actually putting this well-aimed fire on the enemy, let us consider it from the angle of effective rounds per minute. Since the field manuals on the BAR and M1 state that the sustained rates of fire for these 2 weapons are respectively 40-60 rounds per minute and 8-10 rounds per minute, let us deal with the absolute minimum of each, figuring that the shooter is changing his targets as he knocks them off. Thus, we will consider 40 rpm as the minimum well-aimed shots for the BAR and 8 rpm for the M1.

It has been felt, in the last few years, that some of these rounds have been "misused" in many FMF rifle companies. Why do I say this? Because recently the Commandant of the Marine Corps sent out a letter to all commands implying that too many fire team leaders have been sacrificing the well-aimed shots of their BARmen and M1 toters (assistant BARmen and riflemen) when they (the fire team leaders) had entered into the firefight.

What's wrong with this, you ask? Just this — since the BARman is good for 40 rpm, the rifleman for 8 rpm, and the assistant BARman for another 8, this totals 56 well-aimed rounds per minute to be blasted at the enemy under the skilled and watchful eye of a well-trained fire team leader. However, when the fire team leader enters into the firing picture as an active participant, he adds another 8 rpm, but in doing so, and raising the fire team total to 64 rpm, he is jeopardizing the over-all accuracy and target designation of his 3 followers. Thus, in raising the total amount of firepower some 14 per cent, he might be permitting his troops to fire haphazardly at some lesser targets, which would endanger the over-all effectiveness of his remaining 86 per cent, or he might conceivably miss some hand-and-arm-signals from his squad leader.

The basic point that HQMC brings out is that a fire team *leader* is, or should be, just that — a leader first, and a firer only during critical actions. Now, I realize that the *Marine Rifle Squad* does not state that now, as it does for the squad leader, but the Basic School Tactics Group has been informed that it will soon be revised to read so. Thus, once again, we see that the primary job of this smallest of unit leaders is to direct the fire of, and provide protection for, his BARman, and then for his 2 remaining M1 shooters.

In further support of this pro-BAR thesis, let us look at the extremely well-qualified writings of S. L. A. Marshall who states in his commentary on *Infantry Operations and Weapons Usage in Korea during the Winter of 1950-51* that, "Under the conditions of the average infantry fight in Korea, the BAR, even more than the machine gun, provides the base of fire around which the action of other infantry weapons builds up and the force expresses itself unitedly.

"It is not alone the case that analysis of company operations warrants this appreciation of the weapon; the men also make this estimate of its effectiveness; they state frankly that it is the mainspring of their action, and that wherever the BAR moves and fires, it gives fresh impulse to the rifle line."

Marshall made a rapid trip to Korea and was physically present during a portion of the 1st MarDiv breakout to the sea. While there, he discussed military matters right down to the platoon and company level with the members of units which had taken part in actions he considered to be good historical ex-

amples. As a result, he further states that the BAR . . . "is still considered 'indispensable' and troops shudder at any suggestions that it might ultimately be replaced by some other weapon. They cannot imagine having to get along without it."

That the BAR is our most terrific offensive and defensive weapon on the small unit level for most situations is pretty well brought out by another of his statements: "The BAR is the pivotal weapon in this eddying of the tactical situation. Should the rifle line begin to bend at one point, the BARs are sent there to stabilize it. If the machine gun, stopping the enemy frontally, is threatened by flankers circling toward it over dead ground, BAR fire is used to cover the corners and save the gun. During the mop-up, it is the main weapon for neutralizing foxholes; when, on defense, strong outposting is required, the BAR is also given that assignment."

LtGen Gerald C. Thomas, in a conference at the Basic School, brought out one point that S. L. A. Marshall, or anyone else for that matter, has always stressed for broad reader consumption and it was this: "The BAR is mighty fine for laying down an effective base of fire. But what most tacticians (those who don't have much background on the small unit level or who don't really know the capabilities of the BAR) fail to realize is that its most effective use is as an integral part of the enveloping or assaulting unit, not just in the base of fire. Here you've given the assaulters, the men who really need some strong firepower right with them, a weapon that makes for a mighty potent assaulting force."

As one of the foremost advocates of the BAR in the armed forces today, Gen Thomas was instrumental, when stationed at Fort Benning, in persuading the former Army Chief of Staff, General George C. Marshall, to retain the BAR. After studying the tactics and techniques of the German army squad, which featured a light machine gun in the base of fire, but made no effort to move the gun with the enveloping or assaulting force, the General felt that not to bring effective enfilade fire to bear on the enemy position from his flank was a terrific loss of firepower.

Since that time, Gen Thomas has been a staunch believer in bringing the fire of a highly mobile automatic weapon (with the BAR as the prime example) to bear on the enemy from his flank, either as an element of the assaulting force, or of a newly formed base of fire.

And that, basically, is the point that I want to make; that not only is the BAR the heart of the base of fire, but it is the lifeblood of an effective assaulting force. Therefore, I sincerely believe that we should start pushing the BAR. Let us get more Marines interested not only in rifle qualification, but in BAR qualification.

Another fact that we cannot afford to overlook is the extreme importance of the BAR to our "new concept" heliteam. In the 'copter "2-day General Field Exercises," the high-point of the Basic School students' field work, the average heliteam of a "fire team-plus," in today's 'copter is still quite powerful because of the BAR.

And when a Marine rifle company's landing site zone is hit by the enemy before its own organic supporting weapons, the LMGs and the 60s, are on the deck, the BARs can be quickly moved to stop the enemy by fire in the area of immediate threat.

Therefore, when we have field demonstrations on the platoon and company level, let us play up the BARman to a point where he is at least on a level with the M1 toter. And let us establish for newcomers into FMF rifle companies, at least, that the bearer of the BAR is a highly respected billet for a highly competent man. It is not just a catch-all job for new men or for those who don't "pack the gear" for other jobs, such as clerks, that seem to be considered by some to be more important.

This last point is a particularly sore spot with most leaders who have spent quite a bit of time in the FMF. It always seems that every relatively unqualified newcomer is immediately "saddled" with what many consider a difficult and somewhat odious job, that of carrying the BAR. I imagine that the main reason for this is the fact that the BAR is quite a bit heavier than the M1, but the average Marine can rapidly acclimate himself to carrying this weapon and soon finds that it is as easy to carry as the relatively lighter M1.

Therefore, it is not just a question of the physical side of things; it is really a mental problem. We must begin a campaign, if you want to call it that, to put the BARman back up there where he belongs, and forget this nonsense about using that billet for anything less than the best trained Pvt/PFC in your fire team, squad, or platoon. USMC

Antecedents — the German squad; an LMG in the base of fire

BACKGROUND ON FORMOSA

By Capt R. L. Johnson

THE AMPHIBIOUS DOCTRINE OF Red China may be developed and tested in the Formosa Strait. The first faltering step in the development of this doctrine occurred in 1949 when the Chinese Communists launched an ill-starred amphibious attack against Quemoy and were repulsed with an estimated loss of 15,000 men, the biggest defeat ever suffered at the hands of the Nationalists. In this attempt, the Communists endeavored to cross the 7,000 yards of water separating the island from the mainland on 3-man rafts deployed in a water-borne version of extended order. While they were beaten off by the Nationalist defenders, there is no reason to conclude that Communist experimentation in amphibious operations has been abandoned.

Since 1949, when Chiang Kai-shek was driven from the mainland to Formosa, the Communists have publicly and repeatedly boasted of their intent to "liberate" the island, the last remaining stronghold of the Chinese Nationalists. While a great deal of this talk is undoubtedly meant for home consumption, it can be reasonably assumed that the day will come when the Reds will endeavor to make good that boast. Recognizing the strategic importance of Formosa, the US has charged the Seventh Fleet with the task of preventing the island from falling into the hands of the Reds.

Militarily, Formosa is one of the most strategic areas in the Asian theater, standing athwart the sea approaches to the ports of China. In times gone by, Formosa and the rocky Pescadores Islands served as a pirates' hang-out from whence to prey on shipping entering the Formosa Strait. But its strategic importance does not end here, for if the island were to fall into the hands of a hostile power, it would threaten Okinawa and Japan to the north and the whole of southeast Asia as well. This fact can be readily appreciated when it is recalled that the Japanese launched their air attacks against Singapore and Manila in WWII from Formosa.

The name, Formosa, a Portuguese word meaning beautiful, dates back to the 17th Century. It was so named by the Portuguese who were contesting with the Spanish and the Dutch for the possession of the island. The ancient name for Formosa is Taiwan, meaning "terraced bay."

This humid, subtropical island lies 100 miles east of Fukien province on the China mainland, astride the Tropic of Cancer. It is actually one of a chain of volcanic islands extending from the Aleutians to New Guinea. As such the island is frequently subject to mild earthquakes. Formosa, or Taiwan as it is referred to by the Chinese, extends for nearly 250 miles from north to south and 80 miles from east to west at its widest point. It embraces approximately 13,900 square miles of territory.

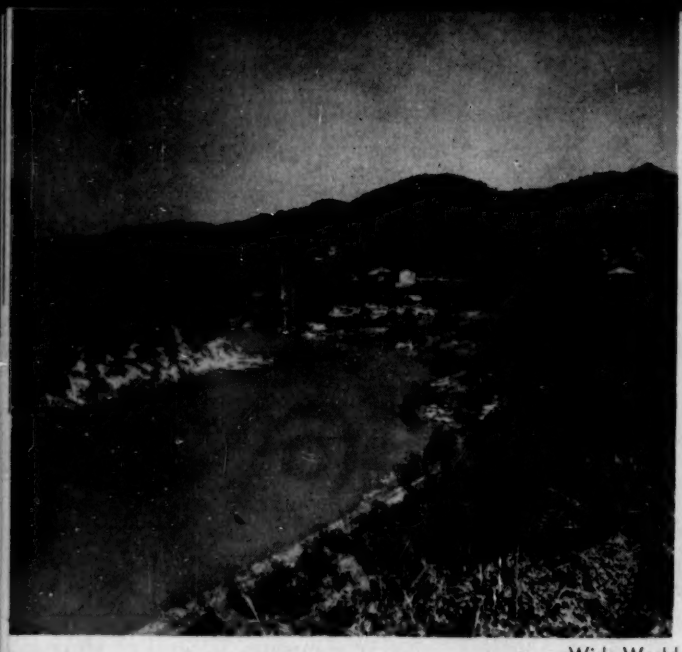
Extending the full length of the eastern axis is an incredible mountain range. In this range, the highest peak, Niitaka (Mt. Morrison) reaches up to 12,690 feet. Forty-seven other peaks exceed 11,000 feet in altitude. This range is referred to as Chu Shan, or the Niitaka Range. The eastern slopes of this mighty range plunge precipitously into the sea, some of its cliffs towering 6,000 feet above the waterline. The western slopes of the range level off into broad coastal plains of alluvial volcanic soil. These plains, comprising about a third of the area of Formosa, are cut by many broad rivers and streams which wind their way into the Formosa Strait.

Except for the upper reaches of the towering mountains, subtropical conditions prevail. Its shores are warmed by the Kuroshio, comparable to the Gulf Stream. Formosa is one of the wettest spots on the face of the earth. Rainfall ranges from a recorded maximum of 289 inches at Kashoryo in the mountains to 40 to 60 inches on the western plains. At Keelung, the principal port city, the annual rainfall averages 200. Overall precipitation averages 83.6 inches per year. The average mean temperature for the summer months ranges from 80 to 90 degrees and during the winter months from 50 to 60 degrees. The island is exposed to 2 monsoons, the northeastern, from early October till late March, and the southwest monsoon from early May to late August. Since the direction of the northeastern monsoon coincides with that of the trade-winds, strong winds carrying heavy precipitation buffet the island. The southwest monsoon is weaker since it moves against the trade winds.

During the torrential downpours, the waters from the mountain range cascade down the western slopes carrying along tons of silt which are deposited on the plains, clogging the mouths of the rivers and streams and filling the Strait itself. Centuries of erosion have so filled the rivers and the waters off Formosa's western coast that none but the smallest vessels dare operate within the sight of land. The Strait ranges from 90 to 220 miles in width. At its southern end are the Formosa Banks, and further to the north, some 30 miles west of the Formosan coast, lie the rocky Pescadores Islands. The Pescadores are comprised of some 70 small islands, aggregating approximately 25 square miles. Adding to these navigational hazards is a persistent mist which shrouds the Strait, the western slopes of Formosa and the eastern seaboard of China.

Nearly two-thirds of the island is in forest. The island abounds with orchids, rhododendrons, fern, lilies, azaleas, bamboo, camphor, liquid-amber, dye, fiber and oil plants, banana, wild fig, palm, fir cypress, pine, teak and other plants of commercial value.

About one-third of the land of Formosa is arable, this consisting of



Wide World

Waterways — rivers cut through the plains

Wide World

Minerals — coal, salt, petroleum, cement and sulphur

the highly cultivated western plains. Sugar cane and rice are the principal commercial crops. A crop of sugar cane can be harvested every 18 months. During the 50 years of Japanese occupation, from 1895 to 1945, their scientists tried unsuccessfully to develop a variety of cane which would mature in 12 months, as on Hainan Island and the Philippines, to the south. Despite this failure, Formosa was developed into one of the world's most important producers of refined sugar, the bulk of her output going to Japan. Today sugar comprises 80 per cent of Formosa's total exports.

When Formosa was returned to China in 1945, the government appropriated all the assets of the Japanese sugar companies and nationalized the industry. The sugar industry is now controlled by the Taiwan Sugar Corporation, an agency of the National Resources Commission. The productive capacity of the sugar industry is over a million tons of refined sugar per year.

The production of sugar has been declining, somewhat recent figures showing an output of some 700,000 tons of refined sugar per year. This decline, however, has been offset in part by an increase in the production and exportation of rice. In northern Formosa 2 crops are harvested annually while further to the south where it is warmer, 3 crops are taken each year. During WWII the fertilizer plants on Formosa were destroyed by bombing and rice production dipped sharply as the overcropped soil became depleted. Since WWII the Economic Co-operation Administration has shipped in many millions of dollars worth of fertilizers and has assisted in the restoration of many of the plants which now have an annual productive capacity of 60,000 tons. As a result of the rehabilitation of the soil, rice production has been increasing steadily.

In addition to sugar and rice, wheat, barley, corn, soybeans, peanuts, sesamum, sweet potatoes and cotton are grown for home use and consumption.

Only Hawaii and Malaya exceed Formosa in the output of canned pineapple. High quality oolong tea is exported. There is a small but thriving banana industry. Over 50 per cent of the world's supply of camphor is distilled in Formosa but as synthetic substitutes are developed the camphor industry decreases in importance. The United States, Britain, Denmark and Japan are the principal markets of these products.

The agricultural pattern of Formosa closely resembles that found throughout the Orient, with its terraced fields, 2-wheeled carts, Chinese implements, water buffalo, pigs and ducks. Human labor is used unsparingly and draft animals are few and far between as more food per acre can be obtained through direct consumption of crops than through feeding them to animals. Since there are approximately 2,000 persons per

Cities — all are connected by rail and road nets

Wide World

Wide World

Agriculture — rice production is increasing

Wide Wor

Ports — Keelung has drydocks and all facilities

every square mile of arable land, the quest for food is evident everywhere, in the carefully kept patchwork of garden plots on the plains and in the tenderly nursed terraces which wind along the hillsides.

In addition to the agricultural products mentioned above, small quantities of coal, salt, petroleum, cement, sulphur, aluminum and paper are exported.

The Japanese, realizing the strategic value of Formosa, began as early as 1895 to convert the island into a self-sustained fortress. A good road network was constructed connecting the major cities and towns as well as a scenic highway along the eastern cliffs. Over 2,000 miles of narrow gauge railroads were built. One rail line links Taipeh with all the principal cities in the west and another line connects the ports of Karenko and Taito on the eastern coast.

One of the most important steps in this program was the construction of an oil refinery in 1942 at Kaohsiung in southwestern Formosa. This refinery, which was completely destroyed during WWII, has been restored. The Kaohsiung refinery, which has the largest capacity of any plant between Japan and Indonesia, has been processing over 10,000 barrels of Iranian crude oil per day since 1948. It is operated by the Chinese Petroleum Corporation, a government agency. Formosa has some oil resources and small quantities have been pumped for many years. The Nationalist government has been endeavoring to locate new fields and to uncover additional petroleum through deeper drilling in the present ones.

Formosa boasts of several good harbors, the best being at Keelung on the northeastern coast. This harbor serves as the gate-way to Taipeh the capital, a modern city of over 500,000 population. Taipeh lies inland, 18 miles southwest of Keelung. The first major improvements at Keelung were made by the Japanese who constructed modern docks and warehouses. This port is now operated by the Taiwan Shipping Corporation, a subsidiary of the Government Harbor Bureau.

The harbor, which faces to the north, is well protected on 3 sides by high mountains. Average water depth in the harbor is approximately 40 feet. Water depth at its entrance is 65 feet. The Nationalists have made many improvements on the harbor, including the completion of a breakwater. Four large modern piers are in operation. The warehouses have a combined capacity of over 150,000 tons. There are 3 drydocks, the largest capable of taking a 20,000 ton ship. The drydocks are operating in active competition with those in Tokyo and ships are frequently towed from Japan to Keelung for repair.

Formosa has a native population of some 7 million persons including 150,000 primitive people who live in the most inaccessible eastern areas of the mountains. These primitives

Defense — half-a-million well-trained men

Wide World

comprise a number of tribes of Mongoloid and Indonesian descent. The Formosans, who regard themselves as kin to the Chinese, chafed under Japanese rule for half a century. While the Japanese did much to develop the economy of the island, the Formosans were never permitted to rise above a state of colonialism. The Formosans, like the Japanese, are among the best educated people of Asia, being about 90 per cent literate as compared to 10 per cent for the Chinese on the mainland. The Formosans welcomed the arrival of Nationalist troops in 1945 but their enthusiasm was somewhat dampened by the excesses of Chen Yi, the Nationalist commander. Chiang Kai-shek subsequently ordered Chen Yi to be executed. The firmness which Chiang displayed in this matter and his earnest efforts to suppress the time honored system of government by "kumsha" has restored cordial relations with the islanders. In addition to the Formosans there are around 3 million refugees from the Red tyranny on the mainland.

Formosa is, by and large, a democratic state with a surprising degree of freedom of speech, press and movement, particularly in view of the ever-present Communist shadow from across the Strait.

Among the most popular programs initiated by the Nationalist government is a land reform designed to break up large land-holdings and reduce the high rate of tenancy found among the poorer farmers. Strong police powers are vested in the Peace Preservation Corps whose chief function is to stamp out Communist infiltration and subversion. While it can be assumed that the vast majority of the residents of Formosa are resolute anti-Communists, there may be some who would hesitate to extend unstinted loyalty to Chiang in order to protect relatives who are unfortunate enough to live in Red China.

The Peace Preservation Corps is a force of about 20,000 men, headed by Chiang Ching-kuo, eldest son and most trusted confidant of the 70-year old Generalissimo. In addition to waging a continuous battle against Communist infiltration, the Peace Preservation Corps is in charge of rehabilitating the Chinese prisoners of war who refused repatriation after the Korean armistice. These repatriates were placed in a number of camps on Formosa itself, and after a program of limited indoctrination, are being absorbed into the Nationalist Army.

Estimates of the strength of the Nationalist military forces range upward to 500,000 men. The army, navy and air force have received extensive military assistance from the US, particularly since the days of the Korean war. In addition to all types of equipment, military missions have assisted in all phases of training, including the establishment of a Marine Corps. A considerable proportion of these forces, both officers and enlisted, are veterans of campaigns against the Reds in China. It is estimated that to date, 100,000 Formosans have entered into the military service. Formosans excepted, the average age of the Nationalists is about 30 years. As time goes by, and age whittles away at the Nationalists, an increasing number of replacements will have to be drawn from among the 7 million Formosans. It would therefore appear that time and a limited source of manpower are the chief threats to the continued existence of a large Nationalist military force.

Unlike the Nationalists, the Communists have an almost inexhaustible source of manpower. Many of the senior Red officers are seasoned campaigners, having fought against the Chinese Nationalists and in Korea. Many have been trained in Russia, and as a result of this training, Russian tactical doctrine pervades their military machine, as is largely typical of all the satellite countries. Fortunately, the wars fought by the Russians and the Chinese Communists have been largely continental in nature. As a result, the Chinese Reds have been forced to start from scratch in formulating an amphibious doctrine.

This lack of experience is, at least in part, offset by several important factors. The Formosa Strait, as previously mentioned, is a dangerous body of water in which to maneuver a modern fleet, thus serving to reduce the effectiveness of defending naval forces. The heavy mists which hang over the Strait for days at a time restrict the scope of aerial observation and defense. The coast of China literally swarms with fishing junks which would serve to conceal the collection of an invasion fleet at the numerous ports along the China coast. The thousands of fishermen who have navigated the Strait for a lifetime know its waters like the backs of their hands. Here at Mao's fingertips are the ships and crews for an invasion. Crude though the junks may be they are surprisingly seaworthy. Built of heavy planking and timbers, and usually compartmented, the junks ride low in the water making difficult and durable targets. While most of the junks are sailing vessels, some are motorized with speeds up to 10 or 11 knots. By patiently gathering an invasion fleet and waiting for a period of heavy channel mist, the Reds might conceivably put their forces ashore under the very noses of the defenders without encountering serious resistence on the beaches.

Even granting that the Reds could, through happenstance, elude the defending naval forces and get a substantial number of troops ashore, they would be faced with the problem of sustaining them and landing heavy combat equipment. Since the junks lack efficient mechanical means of unloading, cargo would have to be manhandled, a slow and laborious process. The great number of junks required to service an invasion force locked in combat with a well-equipped and determined army would be extremely vulnerable targets for both artillery and air power. While a pronounced characteristic of Red military technique is to drown their opposition in a sea of manpower, there is still a minimum amount of equipment and supplies required to keep their forces in the field. Logistic problems could well prove to be the great stumbling block to their success.

The Reds have 3 primary motivations for attacking Formosa, strategic, economic and political. As Red China's amphibious potential increases, the risk of attacking will correspondingly diminish. When risk no longer outweighs motivation, the future of China may be decided in the battle for Formosa. USMC

It's a good weapon . . . let's leave it where it can do the most good

By Capt B. J. Hill

WITH ALL DUE RESPECT TO THOSE of the other religion, I would like to express a few hundred, well chosen words at this time on the mortar/artillery question from an infantryman/mortarman point of view.

Specifically, I am referring to the article in the September GAZETTE entitled *Mortar-Howitzer*. I do not profess to possess the technical knowledge to dispute that author's suggestions for this new-type weapon; on the contrary, if artillery needs a new weapon to replace or supplement their 105mm howitzer, I wish them every success in its development. The only thing I ask is, please leave us poor gravel crunchers with the organic support we so badly (at times) need.

As I mentioned above I am not a highly trained specialist in my job, I am but a proud 0302 who considers himself extremely fortunate to have been assigned to a 4.2 mortar company. I also consider myself extremely fortunate to be able to work with and receive the necessary training from our assigned direct support artillery battalion.

Let me further state that there are several passages in the above mentioned article that I wholeheartedly agree with, i.e., the 4.2 mortar company lacks sufficient transportation, communications and observation facilities. (This is not a quote from the article but merely an implication drawn therefrom.)

I believe that everybody who has ever been connected with a 4.2 mortar company will agree with me that the 3 items mentioned above are the shortcomings of the company. I believe they will further agree with me that we do not need to be reassigned to artillery regiments to correct these shortcomings. Further, I believe that any regimental commander who has needed fire on a target in a hurry and who has grabbed his 4.2 mortar company commander by the scruff of the neck and said "Boy, get those tubes of yours going on that (pointing)," will agree with all of us that we should stay where we are.

Let's not complicate this situation by large T/O revisions and elaborate movements between units. The shortcomings of the 4.2 mortar company can be simply resolved by giving it the transportation and communications it needs. I won't bore you by setting forth my recommendations as to numbers of vehicles or type of radios. Suffice it to say that the mortar company must be highly mobile and possess extremely reliable radio communications. My specific recommendations have been made through the media of annual

T/O and T/E recommended changes currently in force.

One of the biggest advantages of the mortar it its rapid rate of fire. My company has had as many as 120 rounds in the air at one time, and it is not what I would call a *highly* trained company. The only other comparable weapon I can think of in this respect is the 4.5 rocket. This proposed mortar-howitzer being breech loaded could not come anywhere close to this rate. One of our biggest tactical advantages is to blanket an area with surprise fire.

Along about here I would like to take objection to another phrase in the above mentioned article. This time I quote, "You can actually grab a 4.2 mortar by the tube and rattle it. The mortar used for this experiment must have been obtained from Reclamation and Salvage. No self-respecting 4.2 mortar company commander would allow his livelihood to get into such a condition. Naturally there is a certain amount of play in the weapon because of its breakdown characteristics for transportation, but if a company has a halfway decent armorer with a screwdriver and a few borrowed Allen wrenches, even this is practically nil. I do not believe that the *killing* power of the weopon or its ability to neutralize area targets is affected if the weapon is properly serviced and cared for.

We are the first to admit that we are not as accurate as a 105mm howitzer, but on the other hand our mission and normal type of targets does not call for us to be. Besides, that is why we have an artillery battalion in support.

I am not entirely convinced that this weapon is as inaccurate as some people try to lead you to believe.

Of course, I don't mean to imply that we could pull a Lou Diamond and drop the first round down the stack of a destroyer, in fact it might take us 2 or 3 rounds.

I have no desire to be a stumbling block in the path of progress, but I have a fervent desire to give the assault infantryman every ounce of fire support that can be given him. In short, the Marine Corps *has* a mortar, let's leave it where it can do the most good. USMC

Sovfoto

GUERRILLA WARFARE

By Gene Z. Hanrahan

WE ARE ALL AWARE OF THE FACT that guerrilla warfare is almost as old as war itself. At one time or another, almost every nation and army has engaged in some form of guerrilla activity. Napoleon faced organized popular resistance in his attempted conquest of northern Spain, the British found the Boer irregulars a real threat to their pacification campaigns in South Africa and, even in the US itself, such men as Marion the Swamp Fox engaged in guerrilla-type operations to the continual dismay of the British expeditionary forces.

With the advent of the Industrial Revolution, however, changes in warfare resulted in a consequent lessening of the role of the guerrilla or partisan. Technological and military advancements led to the establishment of "great nations" and so-called "national armies." The concept of the unbroken front hallmarked the strategic thinking of the time. The First World War marked the zenith of warfare fought by the national army. It was characterized by military operations conducted within narrow areas in which the opposing armies hurled themselves upon one another with their sole object: total annihilation of the foe. With the exception of a few peripheral places like the Near East, the guerrilla played little role in this type of fighting.

In the years following the close of WWI, new factors emerged which began to influence the conduct of war. Politically, the rapid growth of such ideologies as Communism created a climate in which international political doctrines frequently took precedence over national patriotism. In addition, startling advancements made in such fields as airpower, communications and wireless acted to reduce geographical mass and distance to a point where future conflict promised to embrace, not only greater areas, but actually the entire confines of any combatant nation.

Such developments as these necessarily led to an extension of conflict, involving the civil populace as well as the soldier. Rear areas were made subject to attack. The severity and widespread brutality of warfare placed its burden on almost every citizen, whether he be in uniform or not. In this climate the unbroken front ceased to be a factor the commander could rely upon, and the guerrilla, the partisan and the irregular again began to influence military decisions.

This dramatic change in the methods of war is no better illustrated than by the events of WWII. It was not only global in nature, it was also the first great "total war," drawing possibly as many civilians as soldiers into active participation. As a con-

. . . the constant hypnosis of the inevitable threat of death lurking behind every corner and every bush from morning to night

sequence, there is hardly a nation engaged in that war which did not participate either directly or indirectly in some form of guerrilla or counter-guerrilla action. World War II gave birth to the most widespread guerrilla operations known to man.

It would be impressive here if I could cite the number of guerrillas who fought in WWII and, perhaps, say something regarding the casualties inflicted by such elements. Such figures might well run into the millions. But, I am afraid that is not possible. Records concerned with this type of fighting are notoriously incomplete and inaccurate. The political orientation of such movements, personal ambitions on the part of many of the leaders and general confusion of the times leaves us with little in the way of accurate numerical estimates.

This does not mean, however, that we cannot evaluate the usefulness of guerrillas in time of war. But, admittedly, it does make our task more difficult. One method of approaching the problem can be made by analyzing the type of operations conducted by such elements and, if possible, evaluating their contribution to the overall military effort. In certain areas we have been able to come up with some good indications as to the relative merit of employing guerrillas through this means of analysis.

A review of the guerrilla role in interdicting communication and transportation lines in enemy rear areas is one possibility. We all know that this vital mission is usually considered to be primarily the domain of air power. However, historical evidence indicates that the guerrilla can greatly assist in this effort. Again, I must say that it is difficult indeed to accurately assess the exact contribution made by the guerrilla or partisan, even here. In France, for example, almost every bridge knocked out at the time of the Normandy operation was claimed both by the Allied bombing commands and by the French Maquis.

We do know, however, that the Maquis did manage to destroy thousands of locomotives, railway cars and bridges and in this process certainly assisted in isolating the Normandy battlefield on the eve of the Allied landings. According to the report made by the Supreme Allied Commander, combined bombing and Maquis operations against German transportation lines destroyed 27 per cent of the locomotive servicing facilities, 13 per cent of the locomotives themselves, and 8 per cent of all other rolling stock in northeast France and Belgium by D-Day. In the estimation of General Eisenhower, the French Maquis were worth an estimated 3 to 5 combat divisions at the time. It was through the efforts of the Maquis that the entire flank of the US Third Army could be left exposed in its breakout from the Normandy area.

It may be interesting to note that in terms of rail and road interdiction, guerrilla operations proved to be more effective in bottling up traffic than in actually destroying rolling stock or bridges. In Denmark, for example, partisan operations timed with the Allied attack on France isolated large numbers of trains in a few key marshaling yards. This immobilized traffic became easy prey for air attack. Guerrillas are equally valuable for operations conducted against electric power facilities. In the critical period between October 1943 and July 1944, French Maquis action managed to either fully or partially cut off electric power to the key Paris industrial complex for 257 out of a total of 320 days. During this period Paris industries contributed little to the German war effort.

In view of overall interdiction requirements, we find that guerrilla forces can perform many functions not easily carried out by air power. Pylon towers, all-important in communications, are almost impossible to destroy through air strikes. There are any number of targets which can best be destroyed from the ground rather than from the air. One excellent example can be found in the Allied effort made to knock out the Creuzont machinery works in France. In the summer of 1942, 175 RAF Lancasters bombed this industrial center with negative results. In addition, losses to the French civilian population (principally workers) were heavy: 400 killed and 600 wounded. In August 1943 Maquis elements took on the same mission achieving significant success, with a minimum of civilian and partisan losses.

The interdiction picture during the German campaign in Russia is even more startling. According to Fieldmarshal von Manstein, Soviet partisans proved to be a major threat to the security of entire German armies. In the course of one 1-hour period in 1944, the German Army Group Center suffered nearly a thousand guerrilla raids on rear area roads and railways. In some cases, partisan interdiction was so effective as to completely immobilize entire German forces. For example, a large partisan force managed to effectively interdict the main supply route to the Third Panzer Army from winter of 1943 to late spring of 1944. During this same period, the Third Panzer Army found it impossible to carry out offensive operations because of a lack of supplies and reinforcements.

In addition to interdiction of German supply and communication lines, the Russian partisans were also effective in assisting in the final breakthrough of the Soviet army. Through partisan action, large German elements were surrounded in the region of Bobruisk, Minsk and Mogilev – these forces were subsequently destroyed. With the withdrawal of the German armies, Soviet guerrillas were able to attack and seize Minsk from superior German elements, despite the fact that the

main Russian armies were many miles distant.

It is important to note that, despite the value of Russian partisans in an interdiction role, the Soviet High Command considered this to be only a complementary feature to the main guerrilla mission. According to official Soviet reports, ". . . the most important result of guerrilla activity on the Germans was that constant hypnosis of the inevitable threat of death lurking behind every corner and every bush from morning to night." The Soviet High Command did not attempt to deny the previously cited tangible results of guerrilla activity, but it put its major emphasis on the so-called "psychological effects" of such action. Those of us professionally interested in analyzing guerrilla warfare as a weapon within the weapons system complex find that you cannot assign a numerical value to such an effort. But a close review of captured German documents relating to partisan activity indicates that it played no little role in reducing German military effectiveness.

There are, of course, many other roles guerrillas can play in modern warfare. Intelligence is one, although WWII experiences indicate that guerrillas are notoriously poor in giving order-of-battle reports, especially concerning enemy troops operating within their own immediate areas. The average guerrilla commander is usually overoptimistic in reporting on the enemy strength his particular unit is tying down. The reason for this is all too obvious. The commander's report is aimed at extracting more supplies and weapons or, possibly, an additional medal or two. But, along this line, we know that the Polish partisans were instrumental in capturing one of the first German experimental V2 rockets. This rocket was disassembled and subsequently flown out by light aircraft to England. Its capture enabled the Allies to predict the course of German rocket development throughout the war. In addition, partisans have been effective in capturing high-ranking enemy officials, many of whom proved of great intelligence value. The German military commander of Crete, for example, was captured in a partisan ambush and provided the Allies with invaluable information concerning defenses on that and other islands held by the Germans in the Mediterranean.

Wide World

French Maquis — worth 3 to 5 divisions in Normandy

Other missions which guerrillas are capable of undertaking are: establishing and running of escape and evasion nets; rescuing prisoners of war (as for example the combined Ranger-guerrilla operation against the Japanese PW camp at Los Banos in the Philippines); carrying out antiscorch operations (these proved very successful in hindering German withdrawals in northern Italy); and in so-called "traitor-killing" operations. This latter function enabled the guerrillas to reduce the amount of civilian co-operation with the enemy occupation authorities and, at the same time, rid the country of undesirable dissidents. In Poland the resistance movement liquidated almost 800 Gestapo agents alone during the war. The Malayan People's Anti-Japanese Army, the Communist-led resistance movement in that area, reported by its own records that it had executed or murdered some 2,542 "traitors." This should be measured against a total of 2,300 Japanese casualties claimed by that same force. Sadly enough, the Communist guerrillas in Malaya frequently did away with a number of anti-Communists through the simple expedient of labeling them traitors.

This is, of course, but a brief survey of the value of guerrilla performance in WWII. Yet it does indicate that they did and can perform an important role in warfare. Few records are available concerning the cost of supporting guerrillas, but it is certain that the guerrilla is, economically, a cheap item. The noncombatant, creating an unfavorable "division slice" in the average guerrilla unit, is negligible. A few planes, arms and ammunition, some intelligent direction and co-ordination can work wonders in an area in which resistance flourishes.

The story of guerrillas and guerrilla warfare did not end with V-J Day. The forces of the Free World learned to their dismay that the guerrilla legacy continued as it still continues today. No little credit for this can be given to the Communists who, as we all know, have made maximum use of this form of fighting. The Communists found that their guerrilla efforts during WWII held great payoff potential for the postwar era. Wartime resistance efforts enabled the Communists to train guerrilla forces, store up supplies of weapons and ammunition, indoctrinate a large mass following, and generally improve their political power through the addition of a trained and efficient military arm.

In Europe, it was this favorable condition which enabled the Communists to take over large areas of Eastern Europe. In Asia, China and

northern Viet Nam were won largely through the effective employment of guerrilla forces. At the present time, Malaya, Burma, Laos and the Philippines still suffer from Communist-inspired and directed guerrilla revolts. Although the strategy of the Communists now appears to be in the direction of the so-called legal or parliamentary struggle (in which attempt to come out into the open as recognized political parties), there is no indication that they have changed their views concerning the long-run value of guerrilla operations. We can most assuredly expect Communist guerrillas to plague the forces of the Free World for some time to come.

Probably the greatest credit for the resurgence of guerrilla warfare in the postwar years can be assigned to Mao Tse-tung, the ruler of Red China. Mao, who led the Chinese Communists through a 20-year guerrilla struggle, is both a brilliant guerrilla commander and theoretician. His writings on the subject have been made required reading for Communist revolutionaries, not only within China itself, but throughout all Asia. Enemy documents captured in such areas as Malaya, Indochina, Burma and the Philippines all bear the strong unmistakable imprint of Maoist guerrilla theory.

It is not the purpose of this discussion to detail Mao Tse-tung's guerrilla concepts, but it might be of some value if we point out, at least in broad outline, the essence of Maoist guerrilla doctrine.

Early in his revolutionary career, Mao found that guerrilla warfare could be the great timesaver of military strategy. Guerrilla operations proved to be the muck, the quicksand in which military machinery bogged down in futility. It was also the cheapest kind of war to wage. It enabled the Chinese Communists to get the most from their vast store of manpower reserves, their huge territorial mass, and their limited technological equipment and weapon supplies. It was the one form of fighting that could effectively interrelate these seeming contradictions.

According to Mao, the guerrilla revolution was to go through 3 stages of development: the strategic defensive, the stalemate phase and the strategic offensive. Throughout the campaign, however, time was considered a factor on the side of the Communists. Their revolution was carried out through revolutionary stages and there was no great need for haste. In fact, it was the enemy's desire and need for a quick and decisive military victory that worked to the advantage of the Communist guerrillas.

In the strategic defensive the guerrillas traded time for space, withdrawing before enemy attack and, at the same time, building up their own forces and popular support. During the stalemate phase, the enemy began to weary of the protracted campaign while the guerrilla forces —through increased strength—found that the balance of power was turning in their favor. In the final stage the guerrillas began their attack and the enemy their withdrawal. It is during this phase that guerrilla forces reformed into regular mobile fighting forces. It is a Maoist axiom that guerrilla warfare cannot achieve complete victory—it can merely assist in bringing the revolutionaries to a point where they are capable of conducting regular military operations.

The Communist guerrilla timetable worked effectively in China against both the Japanese and the Nationalists, though, admittedly, there were other important factors which acted to influence the final military decision there. Indochina provides us with perhaps a classic example of effective guerrilla strategy along this line. The Communist revolutionaries in such areas as Malaya, Burma and the Philippines have utilized this technique with less startling results, but in Malaya, at least, they have managed to wrest a military "draw" from British forces that are superior both in terms of size and material advantage.

It is interesting to note that the Chinese Communists attempted to effect the military decision in the Korean conflict through the utilization of guerrilla elements in South Korea. As early as 1948 sizable Communist-led guerrilla elements began operations there but achieved negligible results against the Republic of Korea forces. Following the withdrawal of North Korean armies, a large number of by-passed enemy elements were ordered to remain south of the 38th parallel. It was planned that these troops reform into guerrilla units and carry out attacks in a co-ordinated effort with local dissident forces against UN communications and supply lines. To facilitate this operation, one entire North Korean division was subsequently infiltrated through UN lines. Effective UN military action coupled with apathy on the part of the civilian populace toward Communist indoctrination led the Communist high command to the conclusion that all was not well with their guerrilla effort in South Korea. The cease-fire talks began before the Chinese Communists could reorganize their guerrilla operations, but it is apparent that they were formulating new plans aimed at improving their guerrilla effort. We can be certain that both the Chinese and the Russian governments plan to make extensive use of guerrillas in any future local or global conflict.

It might be informative here to delve a bit into American military

Red Chinese guerrillas — Mao's theories put into practice

Philippines — Japanese needed 10 combat battalions for rear area security

experiences in the field of guerrilla warfare. In WWII our primary coordination and direction effort was carried on by the Office of Strategic Services (popularly referred to as OSS). Though essentially civilian in nature, it drew upon all the branches of the military establishment and undertook a wide variety of missions of which guerrilla operations was one. In such areas as northern Italy, France and Burma, OSS-directed guerrilla forces made laudable records for themselves. Our achievements in the Philippines are equally impressive. According to the Japanese military commander there, the guerrilla threat to his forces immediately prior to the American invasion was so great that it required the drawing off of 10 fully armed and equipped combat battalions merely to maintain rear area security.

Following the close of WWII, interest in guerrilla operations diminished greatly. With the exception of a few scattered historical studies, little serious thought was devoted to this problem within the military establishment. The sudden surge of Communist guerrilla revolts and peripheral wars in recent years, however, has required a serious re-evaluation of our plans and doctrine as to the potential of guerrilla-type operations.

In 1951 the Department of the Army created a new organization with the direction and support of guerrilla operations in time of war as its primary mission. This organization is called Special Forces (or Special Forces Group, Airborne) and is intended to ". . . train, supply and direct guerrilla warfare behind enemy lines to augment and support combat operations in a theater of war." In areas involving ground combat, this task has been assigned to the US Army. Within the organization of the Department of the Army, strategic planning for Special Forces utilization stems from the Office of the Chief of Psychological Warfare.

Current Army doctrine concerning the utilization of Special Forces aims at employing them primarily against enemy lines of communications in an interdiction role. Special Forces groups, equipped with regular military weapons, are to lead guerrilla elements in overt attacks, raids and ambushes throughout enemy rear areas. It is hoped that they will be able to tie down a considerable number of the enemy's front line troops through their aggressive action. In addition, Special Forces has as its subsidiary mission the establishment of escape and evasion nets to assist downed pilots in returning to friendly lines.

In its formative stages, Special Forces encountered some problems centering around a general lack of knowledge on the part of military personnel concerning its exact mission. As a result, for example, many early recruits believed they were joining "commando" or "ranger" type forces. Needless to say, the necessary qualifications for directing and co-ordinating a guerrilla movement in enemy rear areas are hardly those needed by a commando. I am happy to report that this problem has been largely resolved today, and Special Forces is taking its place as an efficient, reliable fighting element in the US Army organization.

During the course of the Korean conflict we were afforded the opportunity of utilizing Special Forces trained elements in generating and leading guerrilla operations in North Korea. Results of this operation were inconclusive, due in no small measure to a lack of long-range planning on our part and the time-consuming task of selecting-out unqualified personnel. We did, however, learn a number of important things in this operation and plan to profit from our experiences there in any future campaigns. Even though the results of our Korean guerrilla action were not what we would have liked, it is safe to say that in terms of personnel and monetary cost our effort there proved well worth the expense.

There is, today, one Special Forces Group, Airborne (the 77th), stationed at Fort Bragg, NC and another operating in Germany. Both are in a state of combat readiness. In addition, the Department of the Army has currently an authorization for a large Special Forces reserve to be composed both of individuals experienced in guerrilla operations

and those with special knowledge of various foreign areas. At present at least one of these reserve teams is active and several more are in the process of being formed.

Although we have made advances organizationally in this field, there is still room for serious research and operations analysis on the various strategic and tactical problems concerned with guerrilla employment. For example, we are still uncertain as to just how to equate the "killing" value of guerrilla forces, we have much to learn concerning the various problems concerned with logistics, communications and "hardware," and these are a long way from being resolved. Finally, the all-important question of handling the political forces at work in a guerrilla movement is yet to be worked out. It goes without saying that our failure in solving this political problem with any degree of adequacy during WWII contributed in no small measure to the resurgence of guerrilla resistance against us following the cessation of hostilities.

On the other side of the coin, there is much solid evidence to support the contention that the guerrilla has great value both in terms of the overall strategic picture and also in terms of satisfying the immediate military requirements of local area commanders. He is cheap and requires but a minimum of supplies and outside support. It is time that we adjusted ourselves to the fact that guerrilla forces will be employed extensively by both sides in the advent of another war and that their role promises to increase rather than diminish in future conflict.

Along this line it might be profitable to note that we can expect the various potential targets for guerrilla forces to increase both in scope and size in future wars. Communications and transportation systems promise to be more complex, extend over even greater distances and, by their very nature, be increasingly more vulnerable to guerrilla attack. Such key installations as radar stations, guided missile sites and nuclear weapons storehouses might be hidden and decentralized as a defensive measure against air strikes, but they would be hard pressed indeed to put up effective resistance to a well-executed guerrilla attack.

Another important use which should be considered is the close integration of guerrilla elements in a co-ordinated action with air power in achieving successful interdiction of certain key enemy supply or communications lines. Ideally, for example, strategic intelligence may decide that the interdiction of a particular rail line would greatly reduce enemy effectiveness at the front. It may also be concluded that this road could be interdicted with, say, 75 per cent effectiveness by air power but that an interdiction ratio of 85 per cent would be required to effectively neutralize it over a period of time. It may well be that guerrilla elements could successfully interdict the remaining 15 per cent. This is merely a hypothesis, but it appears to be worthy of further study.

Finally, with the current threat of nuclear warfare, it may be well to speculate on the feasibility of such operations conducted in a war fought with atomic weapons or under an atomic threat. Current studies concerned with appraising the nature of such a conflict indicate that it will be characterized by decentralization, dispersal, extended communications and transportation systems and, perhaps, a highly mobile rather than a MLR-type defense. Within such a framework, the potential for guerrilla effectiveness is greatly increased. In addition, the very nature of such fighting may well increase both the chances of regular combat units being cut off and isolated and also, if considered, improve regular force capabilities of engaging in some form of irregular type of operations themselves.

In this brief discussion it has not been my intention to cover the full range of guerrilla warfare—although perhaps my pedantic approach to the problem may lead some of you to that conclusion. Rather, it is my wish to stimulate further discussion and interest in this vital and timely topic.

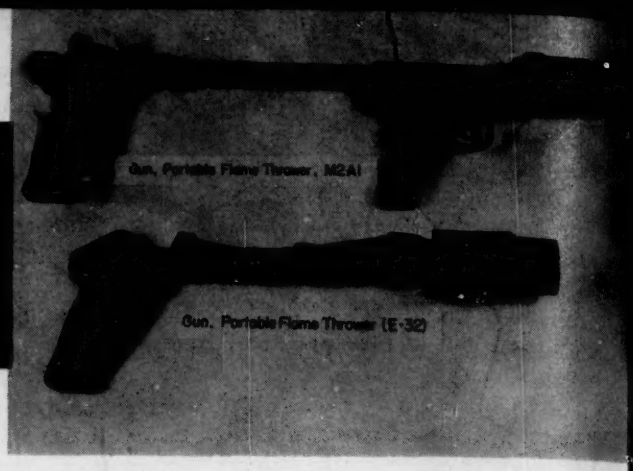
I neither hope nor expect to achieve general agreement with many of the concepts and ideas outlined. In fact, I suspect that some of you are more than a little apprehensive concerning not only my tentative recommendations but, perhaps, my conclusions as well. If I have succeeded in this, then I am content. For, it is through serious efforts made to resolve differences that real progress stems, not only in the scientific but in the military fields as well.

The views expressed here are my own and do not reflect those of any military establishment or command in the Department of Defense.

USMC

41 Commando in Korea — we can profit from the experience

British Info



ORDNANCE

By Capt C. B. Haslam

WHEN ONE LOOKS BACK ON INfantry weapons used during WWII, he wonders what is being done to make them more efficient. Outwardly there appears to be little or no change. However, one must realize that the development or changing of weapons is really a slow process and often difficult to perceive.

First of all, in order to obtain new weapons, the Marine Corps must state a requirement for the type weapons it wants. After this requirement has been firmly stated, contracts must be let, designs made, prototypes fabricated, then tested and modified. Then the production models, if any, must go through the same cycle before they may be adopted and issued.

At the present time one of the big trends in ordnance is that of making weapons lighter in weight wherever possible. Experimentation is being conducted with aluminum alloys, titanium and other metals that will lighten the Marine's weapon load and yet be sufficiently strong to withstand the stresses and strains of its inherent thermodynamics as well as the rough handling it will receive in the field.

Of good news to those who carry portable flame throwers is the fact that a new flame thrower gun will be in use in the near future. Reference is made to the E32 Flame Thrower Gun which weighs only 4.5 lbs and measures 21 inches in length. This is a distinct saving over the present standard M2A1 Flame Thrower Gun which weighs 8 pounds and measures 30 inches overall. Although the new gun is lighter and shorter than the standard gun, the big and important feature of this new item is that the fuel valve lever is much easier to operate. This is made possible by rearranging the pivotal point of the lever so that the strongest fingers of the hand are utilized to their fullest extent. Because of this feature, its shorter length and reduced weight, flame can be directed to a target much more quickly and accurately than with the standard M2A1 Gun.

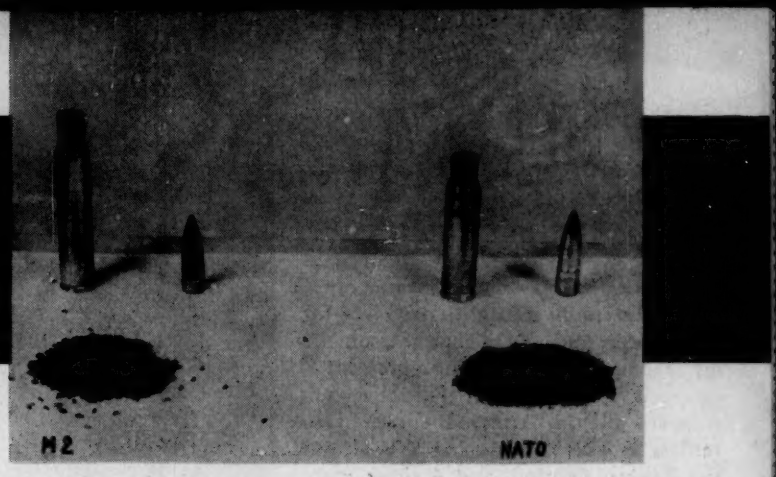
Some may ask, "How about a new flame thrower to go with the gun?" That is on the way too, but it will probably be another year or two before it finds its way into our supply system. Not too much may be said about the design of any new portable flame thrower except that it will weigh about 50 pounds. This weight includes the fuel and the new gun. The big improvement will be its capability of evacuating nearly 100 per cent of its fuel.

Compare this capability with the present "plumber's nightmare," the M2A1 Flame Thrower which weighs about 78 lbs, loaded. Its fuel capacity is 5 gallons; however, it is only filled with between 4.5 to 4.75 gallons in order to allow a sufficient void. But out of this quantity of fuel only 3.75 gallons find their way through the gun since this flame thrower is not capable of evacuating all of its fuel. The new flamethrowers will have smaller tanks and a capacity of approximately 4 gallons of fuel. But, since nearly 100 per cent evacuation of the fuel will be realized, this flame thrower will actually fire more fuel than does the standard portable flame thrower.

Do not be surprised to see a new heavy mortar coming your way shortly. It will be a 105mm mortar weighing about 465 pounds. It has a range comparable to the 4.2 M30 Mortar but differs from that mortar in that it is conventional in design. It consists of a circular one-piece type base plate, a bipod assembly and a mortar tube. Its tube is smooth bored and fires a fin stabilized mortar shell. Like the 4.2 Mortar, it is a drop-fired weapon, but the trigger fire mechanism may be incorporated in its base cap. Being lighter in weight it will afford more rapid displacement since a weight savings of about 170 pounds is realized.

Previous articles have already discussed the progress being made in respect to lighter rifles and they will not be discussed here. It is sufficient to state that tests are continuing in relationship to their development and it will be some time before the services will adopt any as standard items of equipment.

Any new lightweight rifle and machine gun adopted will be chambered to fire the new NATO cartridge in caliber 7.62mm. This new round is approximately one half inch shorter than the present M2 round. The ability to make a short-



er round which ballistically matches the M2 round was made possible by the development of a new smokeless "ball" type powder. Being spherical in shape the grains of powder take up much less space than do the tubular or "macaroni" type powder which makes up the M2 load. Since these ball type grains of powder take up less space it was thus possible to shorten the cartridge case and still retain the performance characteristics of the M2 round. In order to successfully provide "progressive burning" it was necessary to give this ball type powder 2 distinct coatings; one of nitroglycerine and the other a deterrent. Since the deterrent coating is applied last, the burning rate of the powder speeds up as each individual grain decreases in size. Progressive burning is necessary, of course, in order to permit the pressure to be maintained further along the bore. This ball type powder is now known as the M19 propellant.

Not only are light-weight rifles being considered for possible use, but the military is now casting its eye toward the commercial market to determine if any of the new lightweight pistols on the market today would be suitable for military use. At least 2 models of 9mm lightweight automatic pistols may be found on the market today. These new pistols, which are technically semi-automatic in operation, although popular usage dictates they be called automatic, are made for the most part of aluminum alloy. The pistols measure less than 7⅞ inches in length and weigh less than 28 ounces. Compare this with 39.1 ounces and an over-all length of 8.5 inches for the present service pistol —the Colt Automatic Pistol, caliber .45, M1911A1.

The question immediately arises, "Why show interest in a 9mm hand gun?" Without going into too much detail it may be said that the services are concerned about progress being made in respect to new type body armor and protective type helmets; the feeling is that the present .45 caliber bullet is too low powered to sufficiently penetrate new protective body material. Knowing that the 9mm Parabellum ammunition is capable of velocities up to 1,600 feet per second, and also realizing that the high velocity of a projectile contributes immensely to "stopping power," the military is interested in smaller projectiles with higher velocities.

Whether or not a new lightweight hand gun is forthcoming remains to be seen; however, one can see that the trend of light weight is upon us and every effort is being made to lighten the burden of the already overburdened rifleman.

Work has not been idle in the field of lubricants. At this very moment experimentation is being channeled into the field of dry lubricants in an effort to seek the answer of permanently protecting weapons. We are all familiar with the difficulty with which standard lubricants operate when the temperature dips below freezing. They pick up ice, dirt, powder residues, brass filings and so on. Imagine what it would be like to be free of lubricant worries in respect to your weapons. It is not as fantastic as it sounds. Dry lubricants overcome the difficulties encountered when using standard lubricants. Since they are already solid they cannot freeze and when applied to a weapon, the surface becomes so smooth that no foreign matter can adhere to the surface.

In addition to providing lubrication, several dry lubricants show great promise as preservatives. This means that in the future it is quite possible that a weapon so coated can be placed in storage indefinitely and be fired immediately upon issue. This would eliminate the tedious removal of cosmoline with which we are all familiar.

These lubricants may also be used as ammunition coatings. Since they greatly reduce the coefficient of friction between the round and the bore of the weapon, increased velocities are realized. In addition, the use of dry lubricants greatly increases the barrel life of a coated weapon.

When used to coat the ammunition case, the problem of extraction is reduced and the number of ruptured cartridges consequently decreases. Since these lubricants are non-combustible no danger arises from them being so used.

The majority work well in extreme heat or cold and therefore do away with the application of the different climatic conditions. The eventual adoption of these lubricants will be a great step forward in easing the lubrication problems in extreme temperatures.

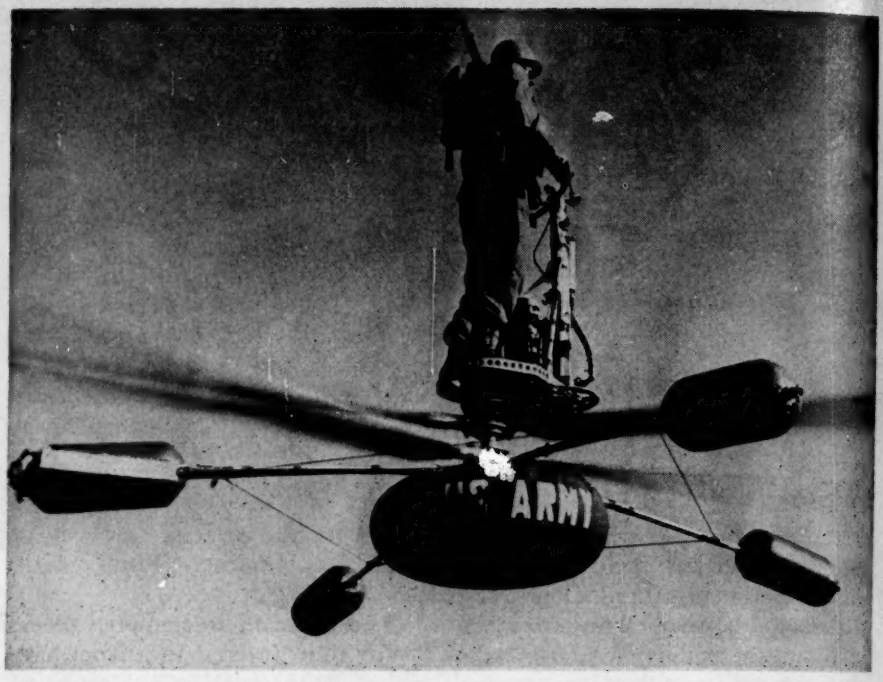
Only a few of the new items of ordnance have been discussed at this time. However, not only are new weapons being developed, but every item of ordnance material is being carefully scrutinized in an effort to make it more suitable for you, the user. USMC

in brief

Development of a versatile new long range radio transmitter-receiver for jeeps, tanks and trucks that goes on the air moments after being parachute-dropped in its vehicle, has been announced by the Army. Engineered to replace models used during WW II and the Korean fighting, and 4 times more powerful, the set combines design with better parts to pack more power into a smaller space. It covers more distance—gives clearer signals and gets through more often. Messages can now be sent over mountains or other barriers without relay radios. Both voice and radio teletype messages can be sent and received at the same time by linking in added parts for the lightweight 100-word-per-minute teletypewriter.

An airborne crane, capable of lifting more than its own weight, has been developed by the Corps of Engineers' Research and Development Laboratories and the American Hoist and Derrick Co. The unit which weighs 14,700 lbs is designed to lift 9 tons at a 10-foot radius with outriggers. The machine is also equipped with shovel, dragline and clamshell earth moving attachments. The crane, currently undergoing engineering tests, is expected to be air-droppable as well as air transportable. A 40-horsepower gasoline engine powers the unit. Twenty-two and a half feet long, it is within the critical transportation limitations of aircraft.

The midget submarine, X-1 (below) embodies the latest features for maximum efficiency, comfort and safety of its 4-man crew. Major features of the sub are: airplane-like dual control system, air conditioning and temperature control, separation of power plant, easy standing room, and adequate water and food storage. Because of its disassembly features, major components can be shipped by air, train or truck.



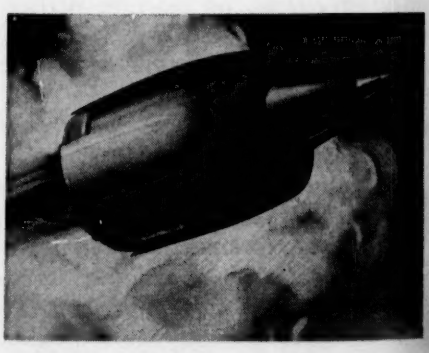
The Aerocycle (above) is undergoing tests by the Army at Camp Kilmer.

The Navy and the Air Force have picked the Air Force Missile Test Center, Patrick Air Force Base, Cocoa, Fla, as the launching site for Project Vanguard. Vanguard is the code name for the man-made satellite program scheduled as part of the US project for the International Geophysical Year 1957-58.

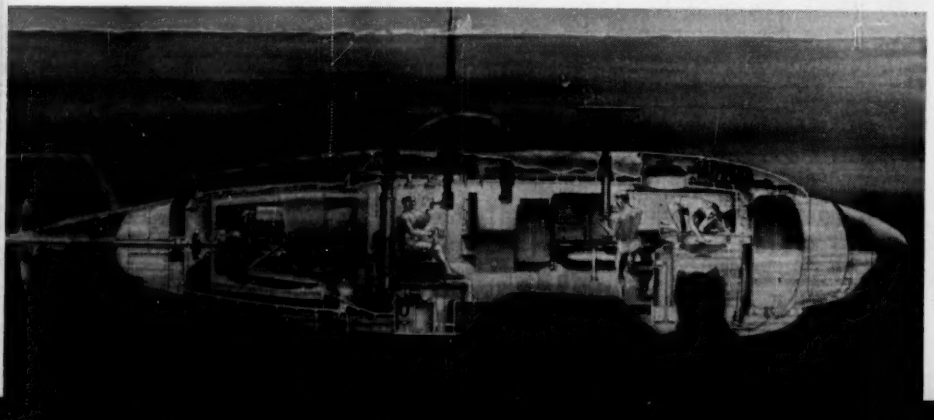
A reunion of old-timers in the amphibian tractor field has been proposed for May or June 1956. The location is Dunedin, Florida, the birthplace of WW II AmTrac battalions. For further information write to LtCol W. E. Lunn, reunion chairman, or Maj D. F. McGeehan, corresponding secretary, at Hq, 2d Amphibian Tractor Bn, Camp Lejeune, NC. In your letters indicate your desires as to dates, etc.

Headquarters Marine Corps announced the publication of the monograph, *Okinawa: Victory in the Pacific.* It concluded the Marine Corps' series of 15 official monographs describing its part in the war in the Pacific. (Order via the Gazette Bookshop, price $5.50.)

Fleet Marine Force units reinforcing and in direct support of the 1st MarDiv from 26 October 1950 to 27 July 1953 now entitled to the second Korean PUC have been announced by Headquarters Marine Corps: 1st AmTrk Co; 7th MT Bn; "C" Btry, 1st 4.5 Rkt Bn; 1st ArmdAmph Bn; 1st Combat SerGp; Team #1, 1st Prov Historical Plt; 1st Fumigation Plt; 1st Am-Trac Bn; Det, 1st ANGLICO; Radio Relay Team, 1st Signal Operation Co; Det, 1st EOD Co; 2d Plt, Auto Field Maint Co; VMO-6; HMR-161; MASR, Team #1; and MTACS-2. Aviation units are entitled to the award only during that period not covered by such an award to the 1st MAW.



The Office of Naval Research has awarded the Kaman Aircraft Corp a contract to conduct research on an annular-wing or ring-wing type aircraft. The ring-wing can best be described as a "flying barrel" (above). It consists of a circular shaped wing, open at each end with the body of the aircraft supported inside the barrel wing. The ring-wing can be powered by a conventional piston engine, a gas turbine driving propellers, or it can be jet propelled by a turbine engine.



Faster launching of Regulus guided missiles from carriers (left) is possible by use of wheeled carts developed for the Navy by Chance Vought Aircraft. The cart is jettisoned after launching. Regulus the first missile to be catapulted, formerly was launched by JATO rockets from a portable launcher 20 times heavier than the new cart.

The Pacific Division of Bendix Aviation Corp has announced the completion of what is said to be the first study of requirements for a helicopter navigational aid.

Titled *Helicopter Navigation Requirements,* copies are available to qualifield people in the military services etc. Write directly to: Bendix Aviation Corp (Pacific Division), 11600 Sherman Way, N. Hollywood, Calif.

The Aeroduck, a device capable of sucking up 500 gallons of water at a gulp has solved the problem of drying up dangerous jet runways in Britain.

As 8,000 Marines of the 2d Mar Div invade Vieques in April during the second Atlantic amphibious maneuver of the year, TRAEX 2-56, the problem of landing and quickly expanding inland from the beach will be even more complex than in WW II. All aggressors are now assumed to have a nuclear weapon potential.

The Marine Corps will sponsor commissioned officers who are selected candidates for the Rhodes Scholarship. This sponsorship permits an officer to apply to the Rhodes committee in his home state with the understanding that if he is awarded a scholarship, the Commandant will order him to duty at Oxford University in an active status for the duration of his tenure of scholarship.

Elections to the Rhodes Scholarships will be held in all states in December 1956, and the scholars-elect will enter Oxford in October 1957. Eligibility requirements set forth by Rhodes Trustees and the Naval Services are contained in Bureau of Personnel Notice 1520.

The USS Tulare (AKA-112), the first Navy Attack Cargo vessel to be equipped with a helicopter platform, moves out to sea (below) during her builder's trials.

Lieutenant General E. A. Pollock, Commandant, Marine Corps Schools, presents *2d Lt David W. Phifer* with the **Marine Corps Association Sword** (above). The sword is presented to the honor graduate of each Basic Course at MCS. Lieutenant Phifer was the second graduate to receive the award. This is the second award from the Marine Corps Association for Lt Phifer. While a Midshipman at the University of Washington he was awarded a 2-year membership in the Association. The membership award goes to the outstanding Marine officer candidate in all NROTC units. He was also designated the number one officer of his NROTC class.

A new flying program for college undergraduates to be known as the Platoon Leaders' Class (Aviation) was announced by HQMC. Candidates will participate in the program while at school through the medium of summer training at Quantico. They will go directly to flight training after graduation and will not be required to attend the Basic School.

REORGANIZE THE SERVICE REGT

FLASH RED! AN ENEMY BOMBER has slipped through our air defense system. A few minutes later there is a blinding flash followed by a shock wave and the sound of a tremendous explosion. Based on observer reports, it is determined that an atomic bomb has been dropped on the Division Service Area. After a considerable delay it is determined that this one weapon has destroyed the bulk of our Class II supplies ashore and the units that supply them; the majority of our third echelon maintenance facilities, personnel and spare parts; the headquarters of the service regiment and approximately one-third of our Class I, III and V supplies and supply agencies.

It is readily apparent that a disaster of this magnitude to our division logistic support agency will have serious effects on the tactical elements of the division. It is conceivable that it could result in failure to accomplish our mission, or even the destruction of the division itself.

Certainly one weapon cannot affect the tactical units of the division if it is properly deployed. Why then should it affect the logistical units in this fashion?

The answer to this question is the crux of this article, and is simply this: under their present organization, these logistic units are forced to concentrate if they are to accomplish their mission. If they separate to safe distances, or attempt to install duplicate facilities, they are unable to provide efficient logistic support.

Can we do something to alleviate this situation? I believe we can, and a proposed reorganization of the Division Service Regiment to permit such relief is included herein.

Since the service element of the Marine division, the service regiment, was reorganized over a year ago, it may seem to many readers that any talk of further reorganization is premature. However, it is submitted by the author that the reorganization of 1954 was not a reorganization of the method of providing logistic support, but merely a grouping of all supply and maintenance functions in the service regiment. The elements added to the service regiment are organized and continue to function in much the same manner as before, but are under the control of the service regiment rather than, for example, the engineer battalion.

What is needed is a reorganization based on new concepts of amphibious operations, as recently approved by the Commandant of the Marine Corps, and on the require-

ment that the service regiment be capable of providing full logistic support to the Marine division under conditions of atomic warfare.

The service regiment of the Marine division, as presently constituted, is organized on the "L" Series T/O issued in 1954. This article will not discuss the present organization in detail, since such information is available in appropriate tables of organization. A brief description of the organization and functioning of the regiment is included, however, to provide the necessary background for the remainder of the discussion.

By LtCol C. E. Warren

As now organized the *Service Regiment* contains a *Headquarters and Service Company,* a *General Supply Service Company,* an *Ordnance Service Company* and a *Motor Transport Service Company.* A brief description of each of these companies follows.

In addition to the normal administrative elements common to most such companies, the *Headquarters and Service Company* contains a *Motor Transport Platoon* containing all of the motor vehicles of the regiment; a *Communication-Electronic Service Platoon,* containing a supply section and a maintenance section, which provide for the supply of communication-electronic materiel and third echelon maintenance on such equipment for the entire division and an *Engineer Service Platoon,* similarly organized, which provides for the supply and third echelon maintenance of engineer equipment and supplies for the division. None of the elements of this company are readily divisible into smaller components for detached duty with major task groupings of the division, or for operation at widely separated points for protection against atomic attack.

The *Motor Transport Service Company* is composed of a *Supply Platoon* for the supply of motor transport supplies to all elements of the division; a *Shop Platoon* which provides shop facilities for repair of motor vehicles; and 4 identical *Automotive Repair Platoons.* Each automotive repair platoon can be separated from the company for passive defense against atomic attack or for attachment to major components of the division on detached missions. However, the repair platoons operate most efficiently when located in the vicinity of the shop platoon. Other elements of the company are not readily divisible into components.

The *Ordnance Service Company* consists of; a *Supply Platoon* which provides for the supply of all ordnance equipment and supplies except ammunition; a *Maintenance Platoon* for third echelon repair of all ordnance equipment; and an *Ammunition Platoon* for supply of ammunition. None of these platoons are readily broken down into smaller elements except the ammunition platoon, which contains 3 identical ammunition sections. The maintenance platoon is capable, to a limited extent, of sending out contact parties for the inspection and repair of some types of ordnance equipment.

The *General Supply Service Company* contains a *General Supply Platoon* which provides chemical defense supplies, clothing and general property to the division; an *Exchange Supply Platoon* consisting of an exchange supply section, 4 regimental and 7 battalion exchange teams for the supply and sale of post exchange items; a *General Supply Maintenance Platoon* consisting of a repair section of 4 repair teams and a salvage section of 4 salvage teams for general supply equipment; a *Ration Platoon,* consisting of 4 identical ration sections; a *Fuel Platoon* consisting of 4 identical fuel sections; and a *Support Platoon* consisting of a laundry section of 6 laundry teams and a sterilization and bath section of 12 shower teams and 2 sterilization teams. As can be seen from the above, all elements of this company are readily divisible into sections or teams for detached duty except the general supply platoon.

Analysis of the organization of the service regiment reveals that it is organized largely on a functional, as opposed to a tactical, basis. In other words, all personnel having a similar function, or concerned with a particular type of equipment or service, are grouped together. No provision is made for the organization of major subdivisions of the regiment for employment in support of major components of the division on detached missions, or for widely separated operations under conditions of atomic warfare. It should be noted that all other elements of the Marine division are tactically organized with the exception of the headquarters battalion.

Our tactical concepts for future operations are well known to most of us through articles which have appeared recently in this and other publications. Not so well known perhaps, are the logistic concepts which are under development to support these tactical concepts. Since the service regiment is the organization most closely concerned with the execution of these concepts, they should be carefully considered in arriving at the most effective organization of the service regiment. In general terms these concepts are described in the following paragraphs.

During unloading of the assault shipping, the maximum possible use of mobile loading, in which supplies are loaded in amphibious vehicles or trucks, will be employed. Supplies which are not mobile loaded will be greatly reduced from amounts carried in the past, and will be landed by helicopter, amphibious vehicles, or by beaching landing ships. Unloading of the assault shipping will be completed in a very brief period of time. As new helicopters of greater capacity are developed, greater reliance will be placed upon this means of landing supplies.

Once the supplies are ashore, they will be placed in widely separated dump areas located well inland. These areas must be separated to the extent that a critical loss of supplies will not be caused by one or two atomic explosions. Other service and maintenance elements must be grouped in these areas to provide protection from infiltrating or bypassed enemy units and guerrilla attack. Maximum use must be made of concealment, underground shelter, revetments and protective terrain features.

Supplies of all types will be issued

from each of these service areas to the units supported using helicopters and/or motor vehicles. Maintenance will generally be limited to that which can be effected by lightweight equipment and limited stocks of parts, and will frequently be performed by contact parties. Stocks of supplies must be limited to permit these service areas to maintain the essential degree of mobility. Greater attention must be given to salvage procedures and the prevention of waste, in order to conserve limited stocks of material.

Resupply will place maximum reliance upon aerial resupply. Supplies may be air-dropped from transport aircraft, or airlanded when airfields become available. Resupply will also be effected from balanced loaded resupply ships which are loaded for selective discharge by helicopter, amphibious vehicles and landing craft. Resupply must be a continuing operation to maintain the limited levels of supply ashore. As the situation ashore stabilizes, supply levels may gradually be increased, but division combat service support elements must continue to retain essential mobility.

What then are the capabilities required by the service regiment for future operations? Certain of these, of course, are dependent upon operational factors, the area of such operations and the nature of such warfare. However, sufficient information of an unclassified nature is available to provide very definite guidelines. Those capabilities which we know must be provided are as follows:

1) The service regiment must be prepared to support regimental landing teams on detached or widely separated missions for extended periods of time.

2) The service regiment must be prepared to establish and operate multiple, widely separated, balanced supply and maintenance installations for all classes of supplies to prevent unacceptable loss from atomic attack.

3) Balanced supply and maintenance components of the service regiment must be prepared to land by helicopter to provide logistic support to large helicopter landed troop units in the all-helicopter assault.

4) Provisions must be made for command and technical direction of the varied service components when separated from the service regiment.

5) Service elements operating separated service and maintenance installations must be prepared to provide their own local defense.

6) The service regiment must have the capability of preparing and loading equipment and supplies for helicopter delivery.

7) In addition to the preceding, the service regiment must have the capability, of course, of continuing to provide effective logistic support to other elements of the division even if a portion of the regiment is destroyed by atomic attack.

Let us analyze the service regiment as presently organized to see if it has these necessary capabilities.

1) The service regiment can support a regimental landing team on a detached mission, after a fashion, by attaching to it teams, sections and platoons of various subordinate elements of the service regiment. However, as we have previously seen, many of these elements do not lend themselves to subdivision as now organized. Since no command element is available in the service regiment to control a grouping of these numerous and assorted elements, such control responsibilities must devolve upon the infantry regimental commander and his staff. It is the contention of the author that these personnel are already overburdened without having this additional responsibility thrust upon them. The infantry regiment must also furnish administrative and housekeeping facilities for such attachments.

2) The service regiment is not now organized so as to permit it to readily operate 2 or more widely separated balanced supply and maintenance installations. As previously explained, those elements of the service regiment concerned with the supply of rations, fuel and ammunition can be divided into effective components; those charged with supply of Class II and IV supplies, and those concerned with maintenance cannot generally be subdivided; those having a service function, such as laundry and shower units, can normally be broken down. Even though some elements are now organized so as to permit their employment in widely separated supply and maintenance installations, no provision is made for command and co-ordination of a number of such elements within separated installations. Since they come from several functionally organized companies, their company headquarters cannot provide such command and co-ordination, nor can the regimental staff effectively provide direction necessary under these conditions. While a provisional command group could be formed from the headquarters and service company, the usual problems of organizing and training such a group would have to be overcome, and the capabilities of the remainder of the headquarters of the service regiment would be reduced. To form 2 or more such groups would be almost impossible.

3) Elements of the service regiment can be landed by helicopter to support major troop components, although little planning and training for such employment has been conducted. Command and control difficulties ennumerated in paragraphs 1) and 2) above would be equally applicable unless all elements were landed in the same area.

4) All Marines are trained in the employment of their basic weapons, and have a limited capability for providing their own local defense. However, an efficient local defense requires considerable planning and direction in order to integrate all available means into the defense. It also requires a nucleus of personnel having this function as their primary duty. When operating multiple separated supply and maintenance areas, as must be done in future operations, no command agency for such areas is available which can provide this planning and direction for the various teams, sections and platoons which will be employed therein, nor are trained security personnel provided around which a defense can be organized.

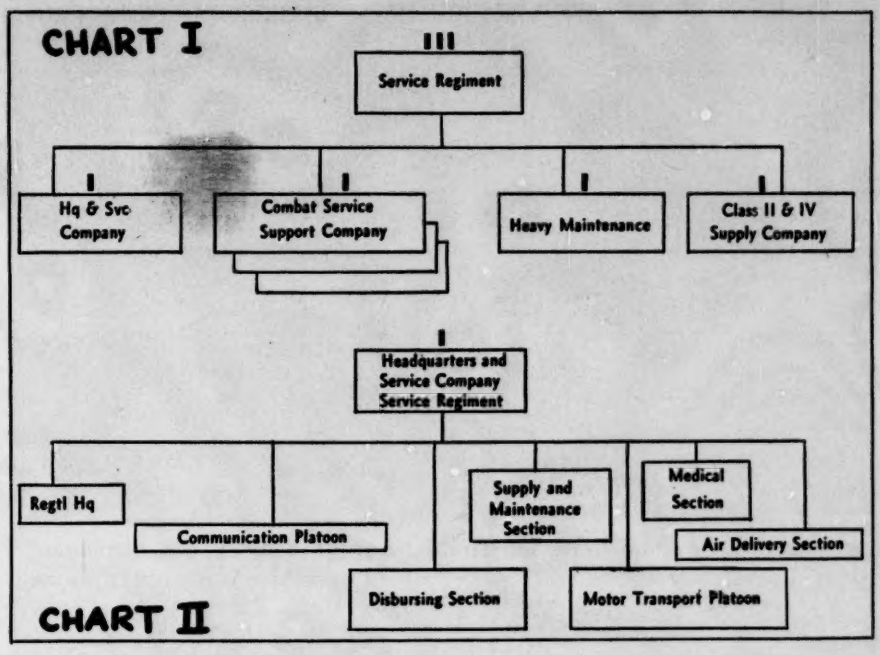
5) The service regiment does have the capability of preparing and loading supplies for helicopter delivery, as frequently demonstrated by the efficient execution of such tasks in Korean operations. However, it was necessary in each case to provide the service regiment with assistance in the form of air delivery personnel for packaging cargo, helicopter or shore party personnel for control of

helicopters, and additional communications.

6) The service regiment at the present time is organized on the basis of experience gained during WWII and Korea. While this organization would be quite satisfactory and efficient for similar operations, current Marine Corps concepts do not visualize tactical operations of a similar nature in future warfare. It appears that the service regiment as now organized, does not have the required capabilities for providing effective support in the atomic age. New concepts of warfare require a lightly equipped, highly-flexible organization capable of supporting, logistically, widely separated fast-moving troop units and, simultaneously, having minimum vulnerability to atomic attack. Instead of delaying the reorganization of the service regiment until required by actual combat, and thus forcing on the division initially the use of "field expedient" organization of the service units, we have an opportunity to insure that we will have more effective logistic support in future operations, by reorganizing the service regiment *now*.

Based on the foregoing discussion, a possible reorganization of the service regiment to fit it for the role it must play in future operations is proposed in Chart I.

It should be noted that the inclusion of 3 combat service support companies provides great flexibility to logistic planners and the service regimental commander in providing logistic support to the division. It provides 3 subordinate agencies which can furnish complete logistic support, on a smaller scale, to major components (regiments) of the division, or which can operate 3 separated logistic installations under conditions of atomic warfare. The headquarters of these companies provide the infantry regimental commander, when such a company is attached or in support, with an agency to direct, administer and coordinate the various elements of the company. They also provide an agency to relieve the commander and staff of the service regiment of many of the details of executing logistic support. Elements of the heavy maintenance company, or the Class II and IV supply company, could be attached to a combat service support company if the situation required. By giving it the capability of operating in widely separated areas, we can insure that less than one third of the service regiment will be destroyed by any one atomic weapon. This organization also provides a headquarters to plan and co-ordinate the local defense of separated service areas, and security personnel around which a defense can be organized.

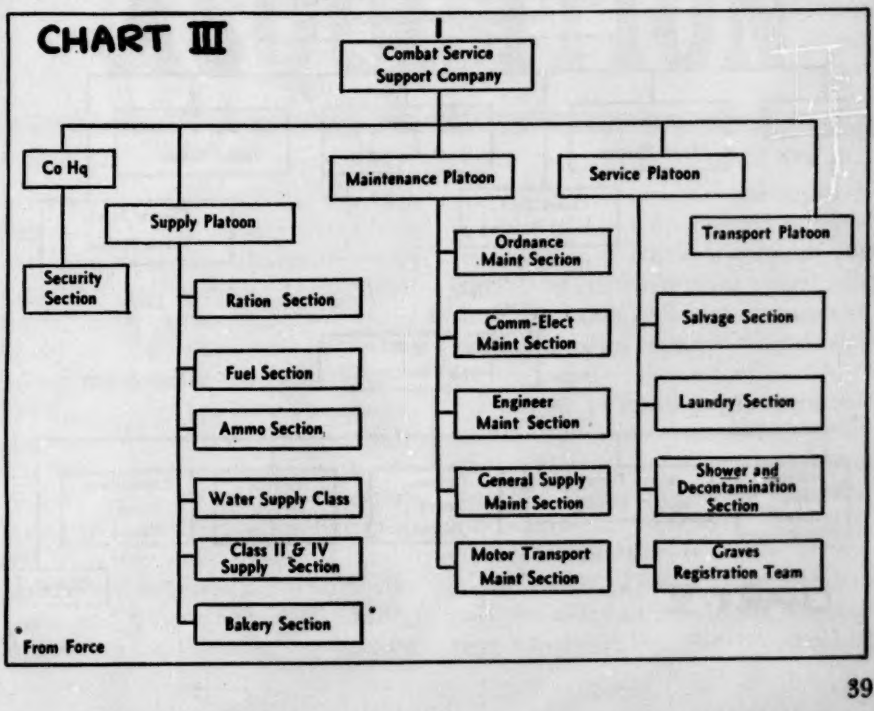


Such an organization would permit those elements of the service regiment not required early in the operation to be readily separated and landed in a later echelon, or perhaps under certain circumstances they would not be required at all.

The major subdivisions of the headquarters and service company are shown in Chart II. The only change of any significance here is in the addition of an air delivery section to give the service regiment the full capability of preparing supplies for helicopter delivery. The communication platoon would require additional personnel and equipment to provide control of the dispersed operations.

The organization of the 3 combat service support companies is shown in Chart III.

These companies are capable, individually, of providing all types of

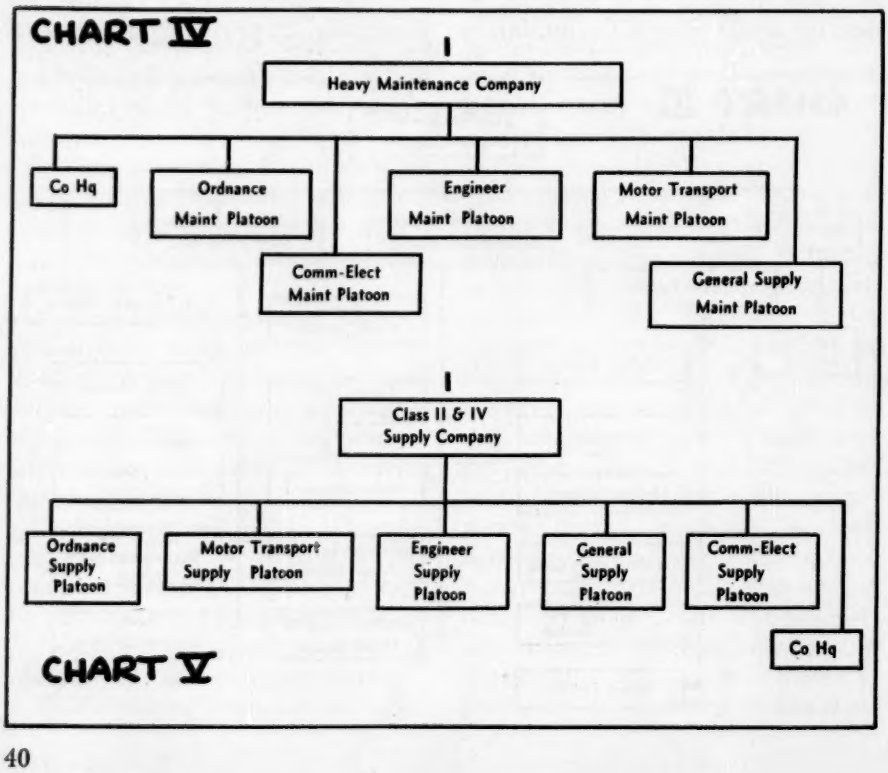


Heavy maintenance would be further to the rear

logistic support now provided by the service regiment, and in addition contain a water supply section, since there appears to be no logical reason for leaving this function in the engineer battalion. Maintenance provided by these companies would be light maintenance of the type requiring limited equipment and stocks of parts. Heavier maintenance would be performed by the heavy maintenance company at locations further to the rear, at the main base of the division, or during rehabilitation periods. Supply stocks of Class II and IV supplies would be limited to strictly operational requirements, and would be replenished periodically from the larger stocks of the Class II and IV supply company or other sources.

The organization of the heavy maintenance company and the Class II and IV supply company are shown in Charts IV and V.

Their functions are self explanatory and will not be developed further herein. If provision is made for heavy third echelon maintenance and Class II and IV supply support to be given by elements of the service command, the proposed heavy maintenance company and the Class II and IV supply company could perhaps be entirely removed from the service regiment. It should be noted that this solution would require a further reorganization of certain elements of the service command.



The advantages of a reorganization of the service regiment such as described have been previously set forth. To make the picture complete, the disadvantages should be briefly mentioned. One of the major disadvantages is that such a reorganization would probably require additional personnel, since 2 additional companies have been added, and the breakdown of maintenance elements into 4 sections (1 in each combat service support company and 1 in the heavy maintenance company) will require some additional personnel.

The training and employment of this organization during garrison duties or peacetime would be more difficult than at present. However, since the main purpose of any military organization is combat operations, this is certainly a minor consideration.

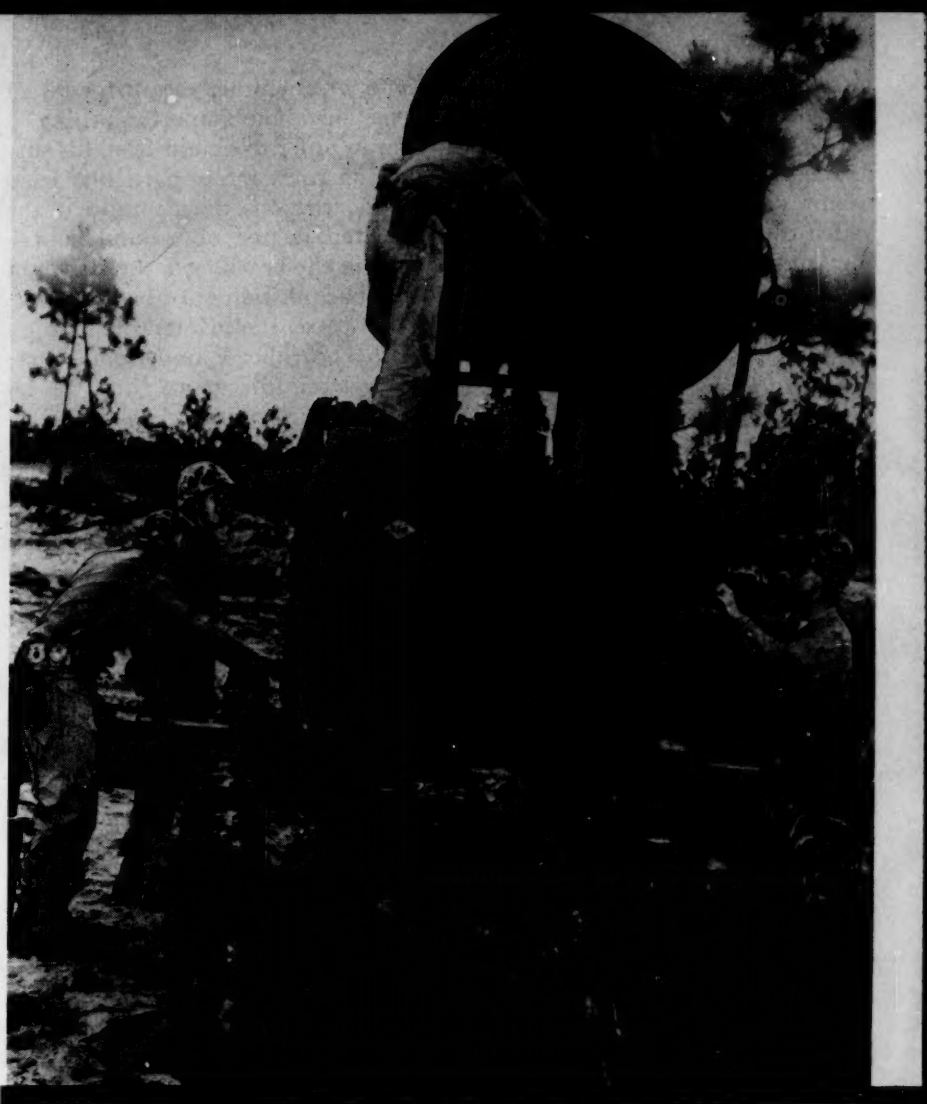
The difficulties of supply control and combat accountability would be greater than in our present organization, since we would maintain stocks and issue from multiple dump areas. However, since we must separate and disperse our stocks in future operations in any case; this is only a disadvantage as long as we retain our present system.

The 2 chief advantages as visualized by the author, however, override any disadvantages, and compel that serious consideration be given to the proposed reorganization at an early date. These are:

1) The service regiment is provided with an organization which is based on tactical rather than functional characteristics, and which will be sufficiently flexible to provide logistic support to the division under any forseeable conditions of tactical employment, and;

2) The division is provided with an organization which can continue to provide logistic support under conditions of atomic warfare, and which will permit separation of service installations to a comparable degree as tactical troop units.

USMC



TARGET ACQUISITION

By LtCol H. J. Woessner

"DON'T FIRE UNTIL YOU SEE THE whites of their eyes," was an order attributed to Gen Israel Putnam at the Battle of Bunker Hill in 1775. At the time it was issued, this order had a lot of merit. In close combat, under conditions of good visibility, the order continues to have some application, even though effective ranges of organic infantry weapons have increased. However, for the short range weapons in use at Bunker Hill, and for the direct fire weapons in the hands of our present infantrymen, the order points up a serious shortcoming; namely, that the target usually has to be visible in order to be taken under fire. If the British had attacked at night or at any other time when the "whites of their eyes" hadn't been visible, the order might have been lost in the archives of defeated commanders.

Despite the additional means of illumination and a small amount of optical and infra-red equipment now available, the infantryman is still limited by the degree of visibility, in bringing targets under direct small arms fire. To carry the illustration further, we can also say that in spite of the increased range and destructive capabilities of mortars, artillery, naval gunfire, aircraft and guided or unguided missiles, with or without atomic armament, their effectiveness in hitting ground targets still depends on the existing degree of visibility.

Prior to the development of radar in WWII, combat in and between the media of air, surface and underwater was conducted primarily with a dependence on visibility and sound. Now, electronics makes combat between aircraft, ships and submarines possible regardless of the degree of visibility, since it is possible to detect and bring these targets under fire at line-of-sight ranges without visual contact. Conceivably, this capability enables a combatant, equipped with the necessary means, to obtain an air or naval superiority in a given airspace or water area, and maintain a relatively effective isolation of the area, regardless of the degree of visibility. Unfortunately, no such capability exists for the isolation of a ground area, and it is here that, as Marines, our primary interest lies. We must have a means of target acquisition which will give us the capability to detect ground targets and take them under fire at the maximum effective range of all of our supporting weapons, under any condition of visibility.

This problem has been recognized, of course, by all services, and projects have been undertaken in the various fields of target detection media and weather study. The projects have been given impetus by the realizatiton that we do not have adequate and timely means of finding, identifying and evaluating ground targets for our weapons systems, particularly those with atomic capability. Since our current weapons are capable of destroying any target, the timely location and identification of suitable targets becomes the primary requirement.

In order to examine the problem which this requirement represents to the Marine Corps, let us view it from the standpoint of an amphibious operation. Consider the missions of firepower available to the Amphibious Troops Commander, and the effect of our target acquisition capability on the accomplish-

ment of these missions. Briefly, these missions are: to isolate the beachhead area from enemy ground reinforcement; to neutralize and destroy enemy targets in the objective area which could interfere with the landing; and to support the seizure and defense of the beachhead.

In connection with the mission of isolating the beachhead, naval gunfire, missiles and air have an increasing capability of destroying or damaging *fixed* targets under conditions of low visibility. (See *Round-the-Clock Close Air Support,* Sept. '54 GAZETTE). Such targets may be bridges, tunnels, railroad tracks or similar installations whose destruction could delay ground reinforcement over routes of access to the beachhead area. Eventually, therefore, with improvements in delivery techniques by aircraft, fire control by naval gunfire and in guidance systems of missiles, an effective degree of isolation and interdiction may be possible by the capability of striking fixed targets under any conditions of visibility. However, with the possible exception of radioactive contamination and the destruction of installations requiring major counter-efforts, most of these fixed targets (natural or cultural terrain features) which we destroy or damage will not constitute effective isolation.

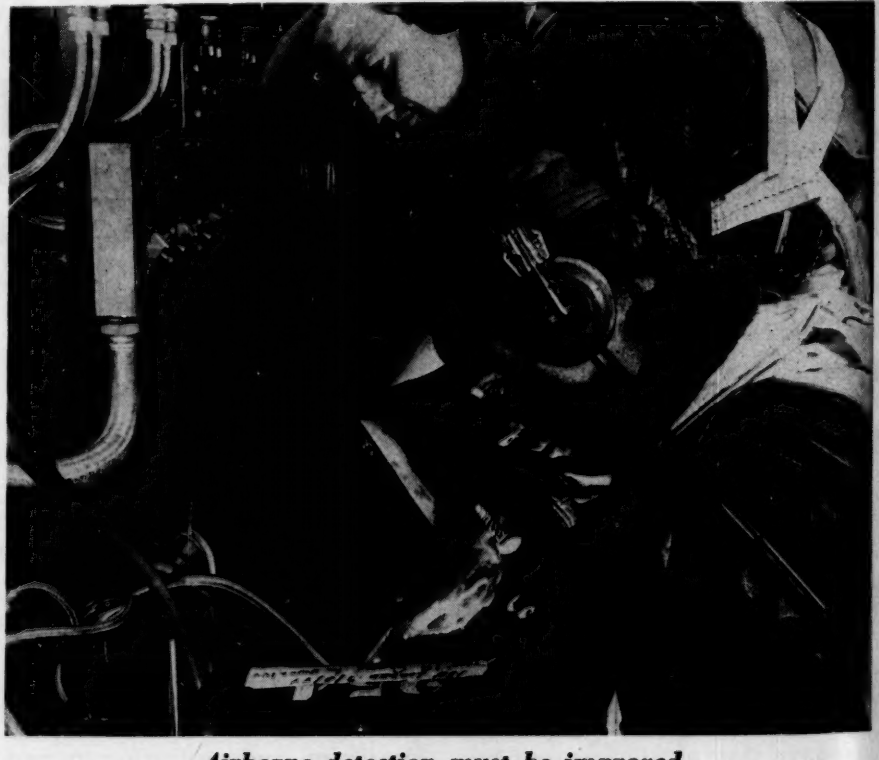
Operation "Strangle" in Korea appeared to confirm the enemy's aptitued for maintaining his flow of reinforcing troops and supplies in spite of this type of interdiction effort. To be effective, therefore, our weapons system for isolation must be capable of destroying the *reinforcements themselves* while enroute to the objective area, under any degree of visibility.

In order to have such a capability, the weapons system must be able to detect a moving target on the ground—troops, tanks or trucks, and furnish this information to the aircraft, gunfire support ship, or guided missile unit for control and delivery of effective fire. Airborne and ship-based radar with moving target indicator (MTI) capability is being developed. It makes little difference to the Marine who makes the assault landing whether the system is airborne or ship-based, uses radar, television, sonar, infra-red, searchlights or any other means for target detection. The important thing is that in order to obtain from his supporting arms, and in particular from atomic weapons, the assurance of the required degree of ground superiority in the beachhead, the system of target acquisition must be improved. In any case, the mission of isolation of the beachhead area from enemy ground reinforcements could be insured by fire support capable of effective all-weather reconnaissance, target acquisition and attack.

When the beachhead is isolated from enemy ground reinforcements, the next task of the amphibious troops' fire support is to prepare the area by neutralizing or destroying enemy targets in the objective area which can interfere with the ship-to-shore movement and initial landing. These may be any direct or indirect fire weapons, including guided or unguided missiles within range. In order to acquire these targets, intelligence agents, ground and air reconnaissance and photography are the normal means. A detection system such as the one described above for detecting moving reinforcements might not be adequate for determining the location of these relatively fixed installations. The first knowledge of the existence of some of these weapons might come only after they have opened fire. In such case, we must have airborne or shipborne devices, probably similar to the existing countermortar radar, capable of locating the enemy weapons quickly and accurately without dependence on their visual observation. Unfortunately, in the case of those weapons with atomic armament, this might not be soon enough to avoid heavy initial casualties, but it would allow us to destroy the weapons before sustaining further damage.

R5D2-2: flying radar research lab

The answer may lie in one of several directions. For instance, if we use atomic weapons for neutralization and destruction, and if we have enough of them, we can attempt complete destruction of all possible enemy weapons installations in the



Airborne detection must be improved

area. Such atomic employment would, in effect, preclude the requirement for good intelligence or target acquisition. If we improve our means of aerial photography and interpretation, we may be better able to pinpoint and destroy the majority of the enemy targets with non-atomic weapons. And, finally, if we improve the efficiency of our intelligence and ground and air reconnaissance agents, we may also be able to acquire a higher percentage of these enemy targets. It is believed that the answer may be a combination of all these means.

It should be mentioned that regardless of the effectiveness of the Amphibious Troops' efforts to isolate the objective area from enemy ground reinforcements, and to destroy or neutralize enemy weapons within the objective area itself, there is a continuing requirement for the isolation of the objective area from enemy air, including missiles and naval forces. This responsibility of the Amphibious Task Force Commander is, of course, co-ordinated with that of the Amphibious Troops Commander. The solution to the problem of low visibility acquisition of these air or naval targets, however, has been combat tested, and is improving in effectiveness; although the interception of supersonic missiles and low flying aircraft may continue for some time to be far from absolute.

Returning to the acquisition problems of the Amphibious Troops Commander, we find that in addition to the firepower missions of isolating the beachhead from ground reinforcement, and preparing it for the amphibious assault, there is the mission of supporting its seizure and defense. The problem of low visibility target acquisition in this phase is essentially the same as before. In order to obtain the information necessary to bring fire on moving targets, as in the isolation phase, some new acquisition device, airborne, shipborne, or in this case one which is operable ashore, is required. In addition to the airborne and ship based MTI capability being developed, ground MTI equipment is now under development for this purpose. In the case of employment of atomic weapons on tactical targets, emphasis must be on the *range capability* as well as on the factor of *timeliness* of the acquisition system. Obviously, the targets must be outside of the danger radius from our own troops. The farther the targets are from us the greater may be the yield of the weapons we employ on them, with a consequent increase in their destructive effects; conversely, the closer the targets are, the greater the possibility that we may be able to obtain effects only in the less destructive fringe areas of the atomic burst. Obviously, then, the weapons system with the capability of target acquisition at *long range* is the most effective for efficient employment of atomic weapons. The existence of this capability even without atomic weapons, could be a deterrent to major enemy reinforcement or redeployment in mass; however, it would induce them to employ the alternative method of infiltration. This, in turn, would require that our acquisition system was *timely*, in order that we might hit the target prior to or just after enemy deployment for infiltration.

The 100-inch lens will help

This brief discussion has been designed to draw your attention to the need for low visibility or all-weather ground target acquisition in an amphibious operation. It is a problem which most of us who think about it will readily admit is of major importance. The depth of the area of responsibility of the Amphibious Troops Commander, the missions and range of his supporting weapons, the radius of effect of mass destruction weapons and the factors contributing to the enemy's preference to fight at night make it imperative that the commander find and destroy targets regardless of their visibility to observers. If it is true, as we are told, that our firepower must make up for the enemy's alleged advantage in manpower, then we must give our system of firepower this capability to make it effective.

The reader's immediate reaction may be that because of the magnitude and nature of the problem it is for the scientist or inventor to solve. That may be true, in part, insofar as a new acquisition device is concerned. However, we must all become aware of the requirement, so that we may improve and make the most of our existing target-getting means until they can be replaced or implemented by a device, or an additional means should it become available.

There are a number of things that we can and must do now. We must become more concerned with the coordination and co-operation of air and ground agencies in the taking, delivering, processing and evaluating of aerial photography, under all conditions of visibility and weather. We must consider the ways of improving the effectiveness of our reconnaissance patrols or agents, and of the communications and other equipment available to them. For instance, we might encourage the field-testing of the one-man helicopter with or without a portable television camera for this purpose. We must continue to improve our techniques of employing visual aids, such as plane, tank, or ground-mounted searchlights; and other existing illumination and optical equipment. We should encourage field testing and familiarization by FMF units of the existing counter-mortar radars and similar electronic devices. If we tackle these problems now and give emphasis to the importance of finding solutions, even though they may be interim, we will be preparing ourselves for the day when the infantryman has been given the same assist by electronics or other means as the seaman and airman have in the past. USMC

NGF

TO THE SLO

Part I

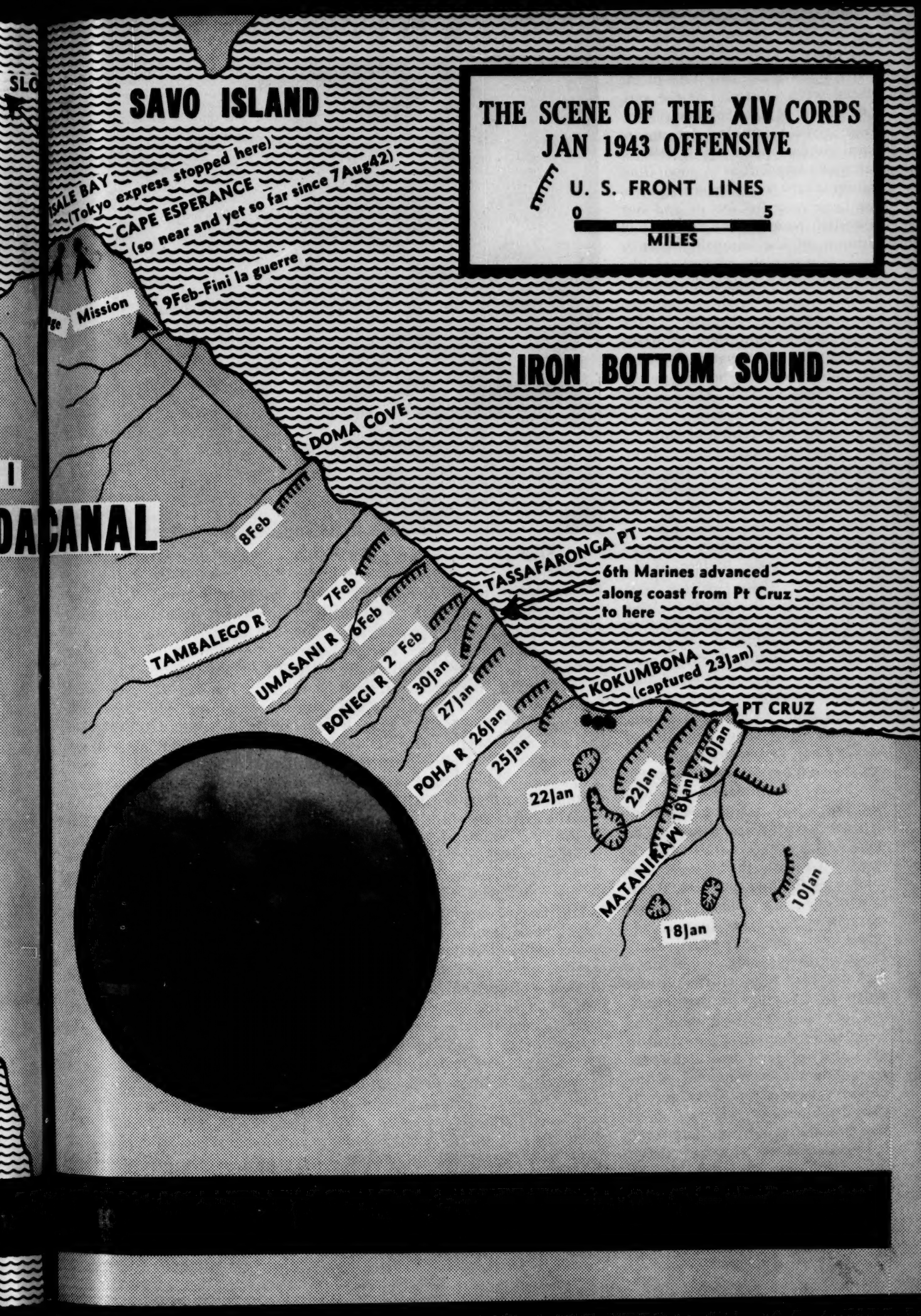
GUADA

By Col F. P. Henderson

THE LATTER CAMPAIGNS OF WW II and our post-war teachings, have accustomed us to naval gunfire support that is meticulously planned and co-ordinated, overwhelming in the crushing weight of its fires, and Johnny-on-the-spot whenever needed by troops. But it was not ever thus. If we should ever be in need of an antidote for our present happy circumstances, a troop's-eye view of naval gunfire support in the Solomons' campaigns will certainly provide it. It may also remind us that Marines can still win battles when things are tough all over.

The Solomon's fracas was the first and most bitterly fought naval campaign in modern history. To the Marines it was the trial by fire which would prove whether their pioneering amphibious doctrines and techniques would stand the test of battle. Troop-controlled naval gunfire was an indispensable part of our solution to the riddle of how to successfully assault a defended beach. The Solomons should tell us whether or not ships' guns could successfully support troops in combat ashore — and if the ship was now master of the fort and shore battery.

The bloody no-quarter land, sea and air battles in the Solomons did prove that our pre-war concept of the role of NGF in an amphibious assault was sound. Unfortunately, we had to receive this proof the hard way. We were never able to get a positive demonstration of the power of naval gunfire through having it available in the amount needed and at the right times. Instead, we had to learn by having test tube quantities available for short periods of time—and all too often, none at all. The latter circumstance was often a successful teacher. It brought home to all hands ashore how much different their struggles could be, if


THE SCENE OF THE XIV CORPS
JAN 1943 OFFENSIVE
U. S. FRONT LINES
0
5
MILES
SAVO ISLAND
(Tokyo express stopped here)
CAPE ESPERANCE
(so near and yet so far since 7Aug42)
9Feb-Fini la guerre
Mission
IRON BOTTOM SOUND
DOMA COVE
8Feb
7Feb
6Feb
TAMBALEGO R
UMASANI R
BONEGI R
2 Feb
30Jan
27Jan
26Jan
25Jan
POHA R
TASSAFARONGA PT
6th Marines advanced
along coast from Pt Cruz
to here
KOKUMBONA
(captured 23Jan)
PT CRUZ
10Jan
22Jan
22Jan
18Jan
MATANIKAW
18Jan
10Jan

only naval gunfire was available.

It is unfortunate that none of the official service histories of the various phases of the Solomons' campaign gives a complete account of naval gunfire operations. The Guadalcanal campaign is a good illustration of how little concerning them has been recorded for us and our posterity. None of the 3 published histories of the campaign give a clear or complete picture of the naval gunfire operations during that bitter struggle. Of the 3 volumes, one might expect that the Marine Corps history would contain the best account. But alas, that is not true. We must give first honors to the Navy. Professor S. E. Morison, superb and readable historian that he is, gives the best account of both US and Japanese naval gunfire bombardments during the entire campaign. (The Japanese efforts exceeded ours for a long time!)

The reason for this historical vagueness and omission is stated very simply in the preface to the Army history where it says, "Army and Marine staff procedures on Guadalcanal were of necessity extremely simple and informal. Most staff business was conducted orally—most staff officers, working in headquarters which were seriously undermanned, often held dual positions and carried a tremendous burden of work. They had neither the time nor the facilities to maintain extensive files." The preface to the Marine Corps history supports that of its sister service when it says, "The units engaged were not as fully indoctrinated with the necessity for submitting full and complete reports as were the participants of later operations." Gunfire operations throughout the entire Solomon's campaign were characterized by a high degree of informality. Written orders were few and far between.

The historical record should be complete for a campaign so vivid in the history of our Corps, and so important in the development of amphibious doctrine and technique. It should tell not only what was done, but how and why it was done—and it should also tell why some things were not done. Perhaps this personal experience account will fill in a few more of the empty pages that now exist in the story of naval gunfire operations in the Solomons.

Staff procedures on Guadalcanal — simple and informal

Someone else will have to fill in the pages on the early days at Guadalcanal—although there aren't too many to write. After supporting the initial landing, friendly naval gunfire pretty well disappeared, to the sorrow of the 1st MarDiv. One of the rare subsequent times it was available to do the job we expected it to was on 27 September 1942. On that day, *USS Ballard* (DD) provided some extremely effective fire support for the 1st Bn, 7th Marines, enabling it to withdraw from the west of Pt. Cruz where it was surrounded by superior forces.

The first planned and sustained use of naval gunfire in support of troops ashore came during the January 1943 offensive of the XIV Corps to clear Guadalcanal of the Japanese. The factors which made the offensive possible, also made gunfire support of it possible. First and foremost, we now had firm control of the air and sea around Guadalcanal, and our gunfire ships could move along the coast shelling the enemy at will during the day. The Navy now had enough ships in the South Pacific so that they could spare a few now and then from purely naval tasks to give assistance to the troops ashore. Ashore we had 3 divisions—enough troops to provide for the security of Henderson Field and still muster a strong offensive force. The Corps' plan of attack called for 2 divisions, the 2d Mar Div and the 25th Inf Div, to attack abreast to the west, with the 2d Mar Div on the right (coastal) flank. The Army's history subdivides this operation into "first January offensive" and the "second January offensive." The first offensive consisted mainly of local operations to get a good line of departure for the second offensive.

In planning the offensive, both the 2d Mar Div and XIV Corps were anxious to get all possible gunfire support. In a general support role, Corps was hoping to use it to take the place of an almost non-existent corps artillery and a meagre tactical air support. The non-divisional artillery units on the island at this time consisted of one Marine 155mm howitzer battery, armed with the WWI Schneider howitzer and an Army seacoast artillery 155mm gun battery, armed with the equally ancient GPF. Their ability to both reinforce the division artilleries of the 2 attacking divisions and to carry on counterbattery and other general support missions was almost nil. Corps was especially anxious for the naval gunfire to get into the enemy

rear areas between Kokumbona and Cape Esperance and start working over the Japanese supply, staging and headquarters installations. In addition to strongly endorsing Corps' desires, the 2d MarDiv was most anxious to get some close gunfire support for its assault units as they bucked into the well organized and bitterly defended Japanese positions between their front lines and Kokumbona.

The organization and training of the forces ashore and afloat, and the ships and facilities available, had a great influence on the planning and conduct of naval gunfire support of troop operations in this offensive—and elsewhere throughout the Solomons campaigns. A knowledge of these factors is essential to understand the what, why and how of the actual shooting. The organization within the Marine division for naval gunfire was somewhat different in that day than it is now. To begin with, there was no full-time NGF special staff officer on the division staff. Division NGF planning was the responsibility of a Major in the D3 section who bore the title "Assistant D3, NGF and Artillery Coord." The Division D3 Section had only 4 officers in comparison with 6 now. So the Major spent a lot of his time D3-ing and had to work in his NGF, artillery and fire-support co-ordination tasks as best he could.

The organization for gunfire support in the lower echelons of the division was also considerably different. The division had no ANGLICO (or JASCO), nor were there any organic shore fire control parties or liaison teams in the infantry battalions and regiments. Instead, the direct support artillery battalions usually had 2 NGF-trained Navy Ensigns or Lts(jg) attached. Sometimes 2 of the battalion's 6 FO teams would be trained in SFCP duties and one of the Navy officers attached. In other cases the battalion might form 1 or 2 SFCP if its personnel situation permitted. These jury-rig SFCP were sent up to front line infantry battalions to provide naval gunfire spotting and liaison facilities when needed. Although all 3 of the 10th Marines direct-support battalions were on Guadalcanal during the January offensive, there were only 4 SFCP available.

The Army units on Guadalcanal (XIV Corps Hq, Americal Division, 25th Infantry Division) had no organization or trained personnel for planning and conducting naval gunfire. As long as it was on Guadalcanal, the 1st Mar Div had done all of the naval gunfire planning and execution. By default, the 2d Mar Div inherited this responsibility when the last elements of the 1st MarDiv left Guadalcanal. The Artillery Officer on the Corps staff was designated the Corps NGFO. As he had no training or experience in this field, the 2d MarDiv NGFO became in effect, the Assistant Corps NGFO in order to help Corps determine requirements, make plans and deal with the Navy.

The Navy's organization for shore bombardment support of the XIV Corps operations was a little bit loose—and sometimes baffling when trying to get gunfire support ships. To begin with, there was no Navy flag officer or staff permanently in the Guadalcanal area to exercise tactical control of naval forces present. Task forces came and went, but nobody stayed. So any requests for gunfire ships to support operations ashore had to go back to COMSOPAC headquarters at Noumea. The commander of the Guadalcanal Naval Base at Lunga Point controlled transient ships at Guadalcanal. For gunfire purposes these amounted to the screening destroyers that had convoyed APAs and AKAs to Guadalcanal. He had some sort of an authority from COMSOPAC to assign destroyers from the screen protecting the ships unloading off Lunga and Kukum to Corps for shore bombardment purposes on his own responsibility. There were a few destroyers over at Tulagi Base with the mission of going out and prowling off Savo Island and Cape Esperance at night to intercept the Tokyo Express on its way to Guadalcanal. One of these could sometimes be obetained for a daylight shoot.

The first major obstacle to be overcome in providing naval gunfire support for the January offensive was getting enough (or any) fire support ships. As none were available locally on a certain and continuing basis, XIV Corps asked COMSOPAC to provide a shore bombardment group for the operation. This request was based on 2d Mar Div's estimate of what was necessary to do the job at hand—and tempered by what they might expect to get. The ships requested amounted to something like 2 cruisers and a half-dozen destroyers. COMSOPAC Hq replied that they were so sorry, but they couldn't provide the requested ships. However, they did agree to provide 4 DDs for the jump-off day of the second January offensive. They said they would try to provide ships whenever available after that, but that the Corps must place its main reliance on temporary use of the transient or station DDs in the Guadalcanal-Tulagi area when they could be spared from their primary tasks.

This pretty well left the Corps and Division at the mercy of the Tulagi and the Guadalcanal naval base commanders, principally the latter. It was a break for the troops that he was a fine naval officer whose heart was with ships and shooting and not with sitting in a Quonset hut in a coconut grove shuffling paper and unloading cargo.

The end result was that the forces ashore were never able to count on having naval gunfire support avail-

Artillery—a few old Schneiders

able in making their plans. Instead, they had to make day-to-day arrangements to get and use whatever ships and ammunition might happen to be available. This unsatisfactory condition started at Guadalcanal and persisted throughout the entire Solomons campaign. It prevented gunfire support from making the contribution it should have.

Another big problem that faced the troops was the state of training in shore bombardment of the ships they did get. Almost without exception, they had received no such training. Before WWII, shore bombardment training was anchor man on the list of ship's annual gunnery exercises. There just didn't seem to be much time or ammunition available for shore bombardment practice. Firing exercises in conjunction with annual FMF maneuvers were usually relegated to weary old 4-stacker destroyers and antique battleships to carry out.

To get the results desired out of the ships that were made available, it looked like the Division would have to train them while they were engaging the enemy. Here the Division was very fortunate in that the 10th Marines contained a considerable number of officers who had learned the facts of life on shore bombardment in the Marine Corps Schools and at Culebra and San Clemente in the FMF maneuvers before WWII. The on-the-job training plan for ships ran something like this. Each ship assigned to a day's shore bombardment would lie-to off Lunga or Kukum and pick up a qualified 10th Marines officer assigned to the ship for that day. Before he boarded the ship, he reported to the 2d MarDiv CP where he was briefed on what the ship was to do during the day, the ammunition allowance, and targets to be hit, communications with shore fire control parties and so on. As soon as he got aboard ship, he would pass this word on to the skipper and assist him in planning how they were to go about doing the day's firing.

When the shooting started, he took his station on the bridge with the skipper. As the majority of targets fired on during this part of the Guadalcanal campaign were adjusted fire from the ship itself, the 10th Marines officer would help the ship locate and identify the target, determine how to go about attacking the target, assist them in conducting the adjustment — or often conduct it himself — and make a damage assessment. Where the fire was being spotted by a shore fire control party, the officer on the ship would assist as necessary.

SFCP spotters — shooting started in earnest in January

Naval gunfire planning was an extremely informal and extemporaneous affair, strongly reminiscent of Abraham Lincoln's days as a circuit riding lawyer in Illinois, when he carried his papers in his stovepipe hat. Due to all the above conditions there never was any set planning procedure or sequence, but it usually ran something like this. The 2d MarDiv gunfire officer would get from the front line regiments their needs for close support fire and from D3 the Division's requirements for deep support fire. These were combined to establish the division requirements.

He would then get in touch with the corps gunfire officer by phone or jolting jeep ride to get the corps requirements or to help determine them. When these were put together, he then would phone or go down and talk to the Naval Base Commander at Lunga about what the troops wanted and find out how much he could give them. Based on the fire support ships and ammo he could provide on any given day, the desired fire support plan would be adjusted to meet the actual capabilities. The Division Gunfire Officer would then notify Corps and the regiments as to what gunfire support they were actually going to get.

Finally, he would brief the 10th Marines officers going aboard ship and pass the word to any shore fire control parties involved as to what ships or supporting fires they could expect. The 4 shore fire control parties available were controlled from division headquarters and assigned to the various regiments in accordance with their needs. At the end of the day's firing, the 10th Marines officers and SFCP spotters would report to the division gunfire officer, either in person or by phone, as to what they had actually done.

The naval gunfire shooting on Guadalcanal got started in earnest early in January. The 2d and 8th Marines did not use any close gunfire support during the first January offensive as they pushed out from the Point Cruz line against little opposition to the new line of departure about 1,500 yards to the west. All of the fire support ships available at this time were used on deep support missions.

Everyone knew that the Japanese on Guadalcanal were extremely hard up for food, ammunition and all other supplies. So available ships steamed up and down the coast between Kokumbona and Visale Bay, shelling all known or suspected Japanese supply, command and troop installations. It was hoped that this would sufficiently further reduce the combat effectiveness of the Japanese so that the main offensive would find a greatly weakened enemy opposing it when it jumped off.

The first of these rear-area targets to be attacked was the Visale Bay area—a small cove to the west of Cape Esperance with a coconut grove shoreline, backed up by the usual grassy hills and jungle ravines. On the eastern side of the cove there was a large French mission school which had a number of sizable frame

and cement construction buildings. On the western side of the cove there was a large abandoned native village of thatched huts.

Available intelligence indicated this area to be a lucrative target for shore bombardment. It was known to be a terminal of the Tokyo Express for both supply and evacuation. API studies of the area showed supplies stacked in the coconut groves and back in the ravines between the coastal hills. G2 was pretty certain that the headquarters for all the Japanese forces on Guadalcanal was located in the mission buildings.

The mission of the first destroyer to attack Visale was to put the headquarters out of business and shoot up the supplies. As no one knew for sure whether or not the Japanese had any coastal defense guns in this area, the destroyer stood several thousand yards offshore when it opened fire on the mission buildings. The Japanese ashore apparently did not suspect that the destroyer was there on a bombardment mission. As she was getting ready to open fire, the stereo range finder operator could see Japanese troops walking around in the coconut grove and going in and out of the buildings. When she opened fire and the first salvo landed close aboard them, there was a great scurrying to cover.

The destroyer spotted onto the target and then began to methodically beat up everything in the mission area. Before it stopped, all of the buildings were badly damaged. Then its fires were shifted over to the native village area and it proceeded to disassemble the thatched huts. As no return fire had been received from the shore after the destroyer opened fire, she gradually closed the range until she was standing close in where she could easily observe and work over the target being engaged. Visale Bay was bombarded frequently thereafter until all the frame buildings had been reduced to rubble, the cement buildings rendered useless, and the supply dumps back in the woods well chewed up. MajGen Patch, the Corps commander, rode one of these DDs for his first experience in naval gunfire and became a convert.

An interesting and prophetic target during this period was a battery of Japanese 3-inch (or 75mm) AA guns to the west of Kokumboa. These guns were located in well dug-in revetments just under the first row of coconut palms in from the shoreline. The DD that was sent up to get them picked them up in its stereo range finder, closed the range to 1,500 or 2,000 yds, stopped the engines and began to shoot time fire over the revetments. The battery never fired a round in return—or ever thereafter. This DD skipper was not only a real John Paul Jones type, but was a man ahead of his time. COMSOPAC later commented on this shoot, saying he considered it a bad practice to lie-to while engaging in shore bombardment.

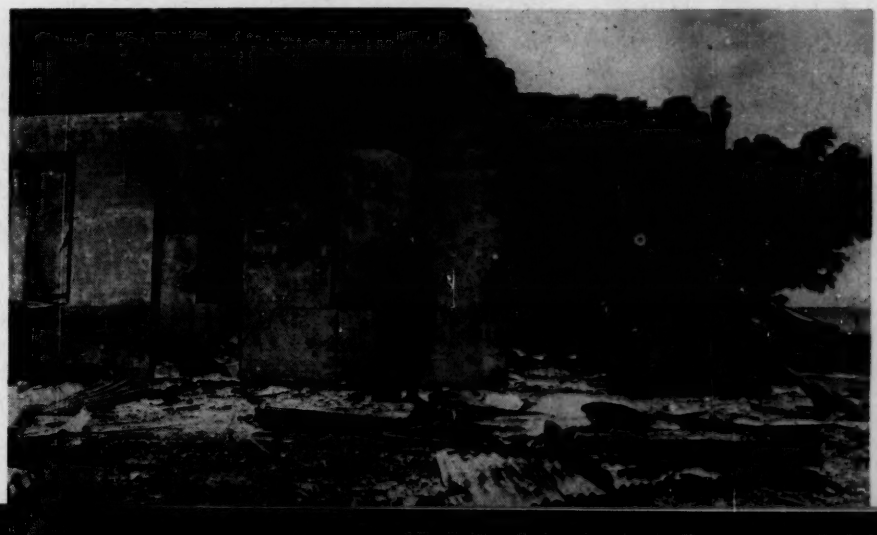
One of the most rewarding missions the destroyers had at this time was interdiction of the coastal road from Visale Bay to Kokumbona. The Japs had to march the troops and haul the supplies they landed in Visale Bay, or other areas, forward to the troops fighting to the east of Kokumbona over a narrow road which ran through the coconut grove very close to the beach. In many places it was only 10 yards or so inland. Traffic on the road was invisible from the air due to the cover provided by the trees, but could be seen from seaward. It was soon apparent that these troops and vehicles were a worthwhile target and so the 10th Marines officers going aboard ships were given standing orders to take under fire any such targets that they saw.

When anything was sighted on the road that seemed to be worth shooting at, the ship would set up the problem and start working to get a real good solution—trying to appear innocent and unwarlike all the while. When the ship was about opposite the troops or trucks, it would open up with fire for effect at the rapid rate, using mixed time and quick fuze. If the ship was fairly close in to the beach, the sailors manning the 20mm guns would also open up and have a big time hosing down the area. This surprise fire was usually devastating.

One of the targets caught in this interdiction shooting was a group of about 200 Japanese soldiers marching toward Kokumbona in a closed up column. It was fortunate this day that an experienced 10th Marines battery commander was riding a destroyer which had fired some previous shore bombardments. The ship was in fairly close to the beach and opened up right smack on the target. The result of that fire mission shouldn't even have happened to an enemy. The stereo range finder operator said that they were apparently freshly landed troops from a Tokyo Express because they all had on good uniforms and packs and appeared well-fed and healthy.

When the 2d MarDiv began the second January offensive it had only one Marine infantry regiment, the 6th Marines. The weary and depleted 2d and 8th Marines (Reinf) had been withdrawn from the Division and sent back for the perimeter defense of the Henderson Field area awaiting withdrawal from the island. When the attack started on the 19th, the 2d MarDiv's name had been changed by Corps to the CAM Div (Composite Army-Marine Division). In place of the 2d and 8th Marines, Corps had attached to the division the 182d Infantry on the 17th of Jan and the 147th Infantry on the 19th. The Americal Division Arty, plus the 2d Bn, 10th Marines pro-

Visale—NGF put the headquarters out of business



vided the arty support for the CAM division. The division attacked on the 19th with the 6th Marines and the 182d Infantry abreast, the 6th Marines on the right (coastal) flank. As the division advanced, the 147th Infantry was inserted into the line, beginning on about the 21st of January, between the 6th Marines and 182d Infantry.

Naval gunfire support of troop operations ashore got underway when the 2d MarDiv (CAM Div) jumped off the morning of 19 January 1943 to open up the second January offensive. This was the only occasion where there were any written orders for naval gunfire support. The Army's history of the Guadalcanal campaign contains the XIV Corps Field Order No. 1 for this attack. Paragraph 3 of that order had a brief subparagraph relating to the naval gunfire support for the offensive.

The division gunfire officer prepared a handmade little overlay order showing the target areas, the location of shore fire control parties, fire support areas for the initial preparation, shore fire control party frequencies, etc. A copy of this order was given to each 10th Marine officer going aboard ship for D-Day as well as to the shore fire control parties.

COMSOPAC made 4 destroyers—the *Radford, Haven, Nicholas* and *O'Bannon* (good Marine name to have present on such a historic occasion) available from the destroyers at Tulagi for the jump-off on the 19th. The 4 shore fire control parties available in the 10th Marines were assigned to the 6th Marines and 182d Infantry to provide necessary liaison and spotters for targets of opportunity. A spotting frequency was set up between each shore fire control party and one of the destroyers so that they could call to a specific ship direct when they wanted a fire mission. Another frequency was also established between the division gunfire officer and all the destroyers, and to which the shore fire control parties could shift when they wanted to reach the gunfire officer. The 10th Marines officers aboard the DDs were given likely areas to search for targets and a free hand on engaging anything they saw so long as their fire would not endanger friendly troops. In particular the spotters on the ships were told to maintain a close observation on the reverse (western) slopes of the numerous ridges which ran perpendicular to the coast between our front lines and Kokumbona.

The DDs executed their preparation smartly and it was a very heartening sight and sound to all the troops ashore. (There was a 15 minute artillery preparation going on at the same time.) All of the Marines and soldiers who had visibility to seaward were right pleased to see the 4 little ships firing away at the rapid rate. Throughout the remainder of the day the 4 ships continued to support the attack of the Division, answering calls for fire from the shore fire control parties or executing those given to them by the 10th Marines spotters aboard.

The CAM Division made about 1,000 yards on the 19th through some of that Guadalcanal terrain that you have to see to believe. All hands agreed that the destroyer fire had been a help. Throughout the remainder of the CAM Division's advance toward Kokumbona, where it linked up with the 25th Div, it had destroyers available to give close support and work over the Japanese rear areas.

After Kokumbona fell the remaining Japanese withdrew rapidly to the west and Corps became engaged in the nearest thing to a pursuit that the South Pacific ever saw. The Japanese' next determined stand was on the west bank of the Bonegi River, some 5 miles to the west of Kokumbona. The 25th Div advanced to the Poha River on 25 January. On the 26th the CAM Div passed through the 25th Div to resume the attack to the west, again having 6th Marines on the right along the coast. By 30 January they had reached a point about midway between the Neuha River and Bonegi River. Then Corps detached the 147th Inf and 2d Bn, 10th Marines from the CAM Div to form a separate pursuit force which passed through the 6th Marines on that day and continued the attack.

During this rapid advance there had been little need for close support gunfire for the advancing troops. Their principal task was to mop up small detachments of Japanese who were fighting a delaying action although there is a note in the records that on the 29th the 6th Marines used destroyers for close support. Throughout this period of the pursuit the DDs continued to work over the enemy rear areas vigorously, trying to further demoralize them and disrupt their withdrawal. In one case the Japanese put troops aboard one of the old transport hulks that was beached along the coast. As our troops passed by, the enemy opened up and made a nuisance of themselves. A DD was sent in to shoot up the hulk, which effectively stopped the fire. Thereafter, DDs would shoot up all the old wrecks just before the troops got to them. One DD skipper wasn't sure whether to enter this type of fire in his log as a shore bombardment or a surface engagement with a Japanese *Maru*!

No one expected the 147th Inf to meet much resistance when they took over the pursuit from the 6th Marines, so it was quite a surprise when the regiment got to the Bonegi River and found that the Japanese didn't want to let them cross it. The enemy had about a battalion of good fresh troops with plenty of automatic weapons who were well dug in and determined to hold up the American advance at the Bonegi while the remainder of the Japanese troops on Guadalcanal were evacuated from Visale at night by the Tokyo Express. The Japanese position had some depth in the extensive coconut palm grove between the Bonegi and Tassafaronga Point, while its right flank was anchored on the low foothills inland of the grove. The first attempt of the 147th to cross the Bonegi near the coast with its 1st Bn was unsuccessful. They then tried to outflank the position with the 3d Bn, by crossing the river further upstream and seizing the high ground on the enemy's right flank. With some difficulty the 3d Bn did get across, but couldn't go much further. A concerted attempt of both battalions to advance with the help of a destroyer giving support was also repulsed.

So then the 147th Inf and the CAM Div gunfire officer cooked up a plan to really use gunfire support to blast the Japanese defense apart. By this time most of the Japanese

positions were pretty well located. One shore fire control party was put up in the hills with the 3d Bn and another down along the river with the 1st Bn. Both parties were carefully located to give them good observation of the enemy positions that were holding up the 147th. Two destroyers, with 10th Marines officers aboard, were to fire an intense preparation on the Japanese position, their fires being walked through the enemy-held area by the shore fire control parties and the shipboard spotters. As soon as they completed their bombardment the 147th would again attack.

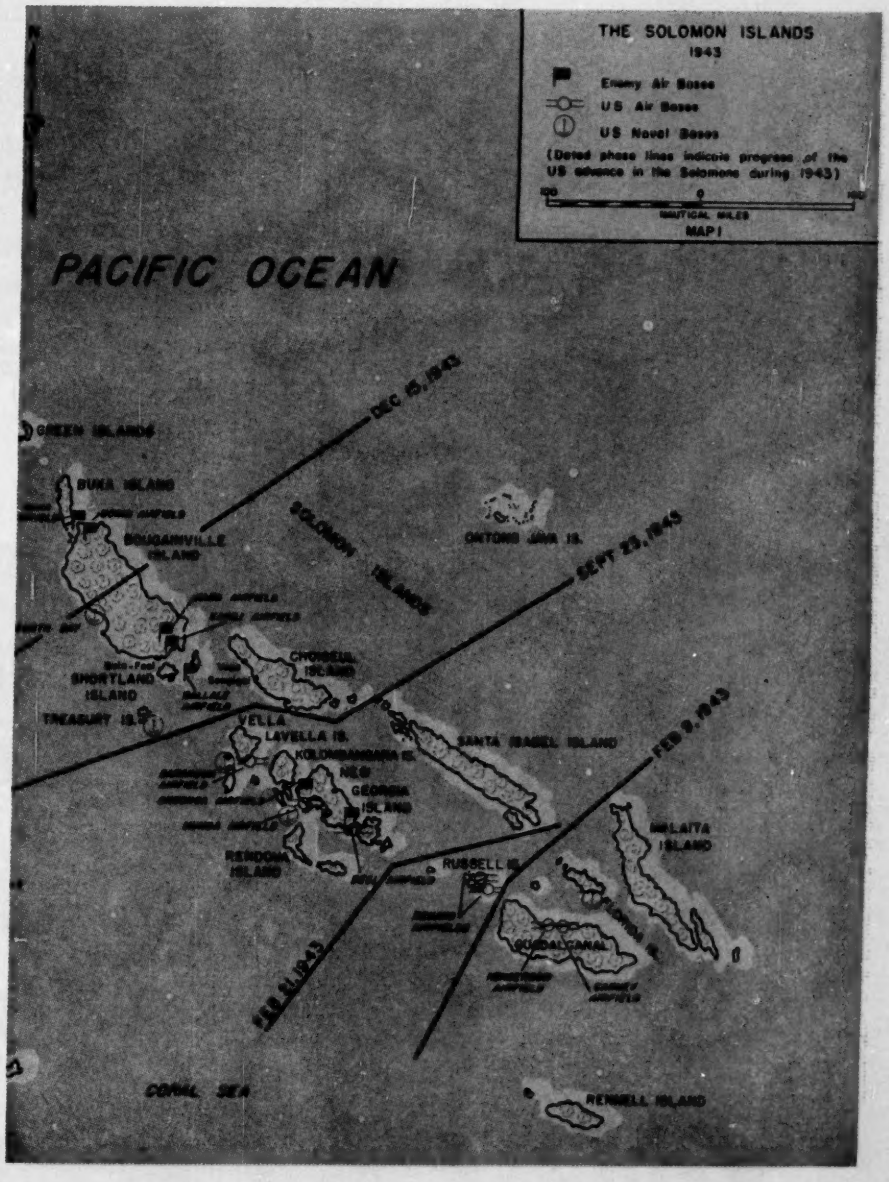
The plan worked out to perfection. The destroyers *Anderson* and *Wilson* lying-to only about 1,000 to 1,500 yards off shore (CINCPAC took a dim view of this, too) did some fine shooting. Communications were good and spotters ashore walked the fire right to the places they wanted it. After dumping well over a thousand rounds of 5-inch into the area, plus the fires of 2/10, who were also kicking them out at a rapid rate, the 147th found the position a push-over. Their troops moved forward and found the area littered with enemy casualties, damaged and abandoned equipment. Those troops who had escaped the deadly fires had taken off at the high port for points west.

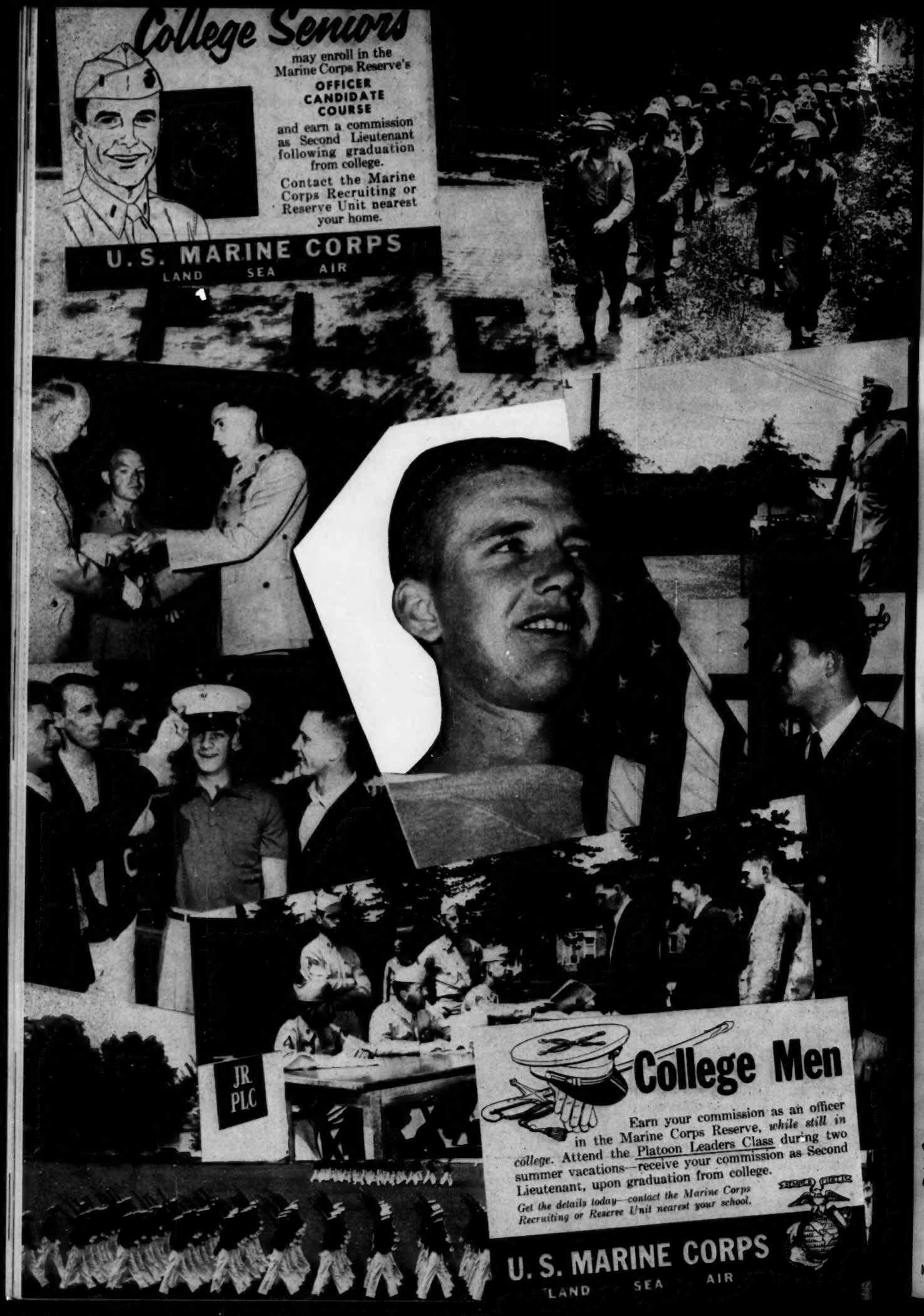
And that pretty well closes the story of NGF support during the January offensive on Guadalcanal. It certainly wasn't a spectacular or earth-shaking experience, such as we were to become accustomed to before the war was over. The few DDs we had sailing up and down the Guadalcanal coast were a far cry from the armadas of destroyers, cruisers and battleships that we were to have supporting us in later campaigns. Yet everyone connected with the show felt right good about it and believed that they had accomplished something. Naval gunfire had definitely made life easier for Marine and Army infantrymen and a lot harder for Japanese infantrymen. It had saved the lives of many Marines and soldiers and taken the lives of many of the enemy.

It was unfortunate that Guadalcanal never gave us a chance to fully test the doctrines and techniques we had developed for NGF support of troop operations ashore. A complete "by-the-book" trial in the first amphibious operation of WWII would have provided invaluable information to guide us in the many landings and bitter battles to follow. But even so, Guadalcanal had its lessons for us. In numerous small actions, from Tulagi on D-Day to the Bonegi River at the end, we had a pleasant foretaste of what naval gunfire support would be able to do for us if we had enough of it, and if both troops and ships were well trained in its use.

We did confirm that 5-in naval gunfire could be devastating against troops in the open and effective against buildings and materiel. We proved on a small scale that direct support NGF was indeed practicable and highly effective when properly planned and controlled. We discovered that a lack of skill in shore bombardment on the part of ships could, in part, be overcome by a high degree of skill in amphibious trained troops. Some people now felt that the modern combat ship was master of the shore battery.

A goodly number of Marines and soldiers had their first combat experience with NGF at Guadalcanal and found out what it could do for them and how to use it, at least how to use it under rather primitive conditions. They also got a lot of good ideas as to how they could use more of it! At the same time a considerable number of sailors were also finding out first hand what this shore bombardment business was all about and how they could best accomplish their task. USMC




College Seniors
may enroll in the Marine Corps Reserve's
OFFICER CANDIDATE COURSE
and earn a commission as Second Lieutenant following graduation from college.
Contact the Marine Corps Recruiting or Reserve Unit nearest your home.
U.S. MARINE CORPS
LAND SEA AIR
JR PLC
College Men
Earn your commission as an officer in the Marine Corps Reserve, while still in college. Attend the Platoon Leaders Class during two summer vacations—receive your commission as Second Lieutenant, upon graduation from college.
Get the details today—contact the Marine Corps Recruiting or Reserve Unit nearest your school.
U.S. MARINE CORPS
LAND SEA AIR

YOUR SON CAN BE AN OFFICER

Many roads lead to a commission in the Marine Corps.

Encourage him to compete for these educational opportunities

By Capt H. L. Wilkerson

FEW REGULAR SERVICE MEMBERS, enlisted men or officers, are aware of the opportunities available to their sons to receive an education for a military career. As a result, many Marine sons do not compete for educational opportunities and appointments to which they are entitled.

Perhaps your son seeks the road to a regular commission in the Marine Corps — either through the Naval Academy or via the Naval ROTC — or perhaps he wants to attend Dad's Alma Mater and still become a regular officer. Perhaps he originally decided against a military career, but after several semesters of college he suddenly discovers that he erred in his original decision. He now wants to be a regular Marine officer.

What advice and assistance can we give this young man in deciding his course of action to obtain an education and ultimate appointment to commissioned rank in the Regular Marine Corps? The answer lies in the following discussion of the 4 major means by which he can obtain his goal: The Naval Academy, NROTC, Platoon Leaders Class, and Officer Candidate Course.

The Naval Academy

The President of the United States is authorized to appoint 75 sons of officers and enlisted personnel of the regular services to the Naval Academy each year. The regular service member who desires for his son to be considered as a Presidential Candidate should address a request to the Chief of Naval Personnel, Washington 25, DC, and furnish the full name, date of birth, home address and current mailing address of his son, together with his own full name, rank, service number and component. This letter should be forwarded 6 to 10 months prior to June of the year in which your son expects to actually enter the Naval Academy. It should arrive in BuPers at least by 31 December as the entrance examinations are conducted the 4th Wednesday of March each year. Since examinations are conducted only once annually, it is imperative that this original request be submitted as early as possible.

In addition to the quota described above, there is also authority for 40 midshipmen at the Naval Academy to be appointed by the President from among sons of deceased members of the land and naval forces of the United States. The father must have been killed in action or have died of service connected disability. The son of such a former service member may make his own application to the Chief of Naval Personnel, stating his request to be considered a Presidential Candidate as the son of a deceased service member. He must furnish his full name, date of birth, home address and current mailing address, together with the name, rank and service number of his father. He should request that he not only be considered under this quota of 40 midshipmen from sons of deceased service members, but also under the quota of 75 for Presidential appointments for sons of regular service members. In this manner he has 2 distinct opportunities for appointment to the Naval Academy.

Sons of all Medal of Honor winners are afforded the opportunity to attend the Naval Academy without quota limitations. Of course, they must pass the entrance examination and meet the physical requirements to avail themselves of this privilege.

The law also authorizes the Secretary of the Navy to appoint to the Naval Academy each year not more than 160 reserve enlisted men of the Organized Marine Corps Reserve or Naval Reserve. Your son can join an Organized Marine Corps Reserve unit while still in high school, so that prior to entering the Naval Academy he will have served one year

in the Marine Corps Reserve, attended at least 14 drill periods, and served a 2 weeks' tour of active duty. In this manner, he is eligible to compete for entry to the Naval Academy under the reserve quota. Thus, he has now opened for himself a third quota whereby he may qualify for entry to the Naval Academy.

Suppose your son is a senior in high school and has recently failed the entrance examination as a Presidential Candidate. What other steps can we take? The most practical step, in these times when military duty is a national requirement, is to have him enlist in the Marine Corps or Marine Corps Reserve. If he is already in, or enlists in the Marine Corps Reserve, he should request assignment to active duty upon graduation from high school. The father should then make a request to BuPers that his son be considered a Presidential Candidate and that he be assigned to Naval Preparatory School, Bainbridge, Md. for instruction.

Although to this point we have only discussed Presidential appointments and appointments made by SecNav, political appointments should not be discounted. The Vice President, each Senator, each Representative and each Delegate to the Congress are authorized to have not more than 5 midshipmen at the Naval Academy at any one time. In addition, the President of the United States may have not more than 5 midshipmen from the District of Columbia at the Naval Academy at any one time. Except for the appointments from the District of Columbia, the remainder of these appointments need not be given to residents of the state represented by the appointing official. In case of the appointees from the District of Columbia, they must, in fact, be permanent residents of the District.

From this it is apparent that members of the Congress who have vacancies at the Naval Academy could appoint your son even though your home of record may not be in the appointing official's state or district. Accordingly, if the Representative from your district has no appointments available for your son at the time he desires to enter the Naval Academy, he probably has a colleague with an unfilled vacancy which could be made available to your son. Contrary to general belief, all vacancies for all officials eligible to make appointments are not always filled.

Upon successful entry to the Naval Academy, what are the possibilities of your son's becoming a Marine Corps officer upon graduation? Sons of Marines and former enlisted Marines who graduate from the Naval Academy are given preference above all other midshipmen for appointment to commissioned rank in the Marine Corps. Even when the normal allotment of graduates for the Marine Corps is exceeded by appointment of all these individuals, they *all* receive appointments in the Marine Corps if they so desire.

The NROTC Program

The Naval Reserve Officers Training Corps was established in 1926 for the purpose of offering to certain college students the necessary Naval Science Courses required to qualify them for commissions in the Naval and Marine Corps Reserve upon graduation. The mission of the NROTC program was greatly expanded in 1946 to include the training of career officers for the Regular Navy and Marine Corps. These 2 training programs now go hand-in-hand and students enrolled therein are known as "Contract" and "Regular" Students respectively.

The Contract NROTC program offers Naval Science training to college men with a reserve commission upon graduation. Students enrolled in either the Navy or Marine Corps as contract students receive a small monthly allowance during their junior and senior years, but must pay their own tuition and other expenses. The Marine Corps, on a continuous basis at this time, also offers the contract students the opportunity for direct appointments into the Regular Marine Corps upon graduation. A contract student requesting a Regular Marine Corps commission must be recommended for such appointment by the Professor of Naval Science at the college from which he is graduating.

The Regular NROTC is designed to offer a college education to a select group of high school graduates, and an eventual career in the Navy or Marine Corps. The Regular program provides for as much as 4 years of subsidized education. Regular students receive retainer pay at the rate of $50.00 per month to assist in defraying such expenses as board and room. The government pays tuition, cost of textbooks, and other fees of an instructional nature.

Since your son aspires to be a Regular officer, how does he become enrolled in the Regular NROTC program? Here the method of selecting midshipmen is completely different from that used for the Naval Academy. There is no preference or special quota for sons of service members. The selection is conducted on a nation-wide basis. All qualified applicants are administered a Navy College Aptitude Test in early December each year. Those who make qualifying scores on this test are given phsyical examinations and interviews at main Navy Recruiting Stations. Selection Committees convened in each State or Territory by SecNav make the final selections from candidates who have passed their physical and aptitude examinations.

Selected candidates are nominated for admission to NROTC colleges, and those selected for admission by the colleges within the NROTC quota for each particular institution will be ordered to report to the Professor of Naval Science at that college.

Your son must make his own application for the NROTC Program by submitting a standard application form for authority to take the Navy College Aptitude Test. Application forms are available by mid-September each year at the following places:

1) High schools, colleges and universities. 2) Professor of Naval Science, all NROTC Units. 3) US Navy Recruiting Stations. 4) Naval Examining Section, Educational Testing Service, PO Box 709, Princeton, NJ or PO Box 27896, Los Angeles 27, Calif.

In cases where the applicant by location is unable to obtain an application form and the accompanying information bulletin, the father should make an official request for advice and instruction either to the Commandant of the Marine Corps or Chief of Naval Personnel.

For the sake of the problem, let us now assume that your son has been selected by the State Committee and must now be nominated by the Navy for admission to the college he has requested as first choice. Here is a real critical area for he could be eliminated at this point by mere selection of a college which too many other candidates have also selected. This is particularly true if he has listed no second, third and fourth choices. The father should remind his son to be meticulous in selection of his second, third and fourth choices of colleges to be sure that his course of study is offered at those colleges.

Of particular interest is the fact that students may not pursue a course leading to a degree in medicine, dentistry, veterinary medicine, theology, pharmacy, music or art. If he is not accepted as part of the NROTC quota of the college of his first choice, he will be notified by the Department of the Navy. He will then be given the name of the college highest on his preference list where a vacancy in the NROTC quota exists at that time. He may then apply for admission to that college. This procedure is repeated as necessary until all vacancies are filled, or until applications will no longer be accepted by the colleges.

If your son is already enrolled in or already attending a college which has an NROTC unit he may become a Contract NROTC student. Contract students are selected each year by the Professors of Naval Science from among college men already attending NROTC institutions or men already selected for admission by the institutions. They attend naval science courses, drills and one summer cruise.

Regular Midshipmen and Contract students alike have the opportunity at the end of their sophomore year to apply for designation as a Marine Corps Candidate. Those accepted as Marine Corps Candidates by the Marine Officer Instructor and the Professor of Naval Science take Marine Corps Science Courses during the junior and senior years of college. The Marine Corps is authorized to appoint to commissioned rank each year 16⅔ per cent of the total graduates, Regular and Contract, for that year. All Regular Midshipmen, designated as Marine Corps Candidates, and all Contract students so designated who apply and are found qualified, are appointed in the Regular Marine Corps. Other Contract students designated as Marine Corps Candidates are appointed in the Marine Corps Reserve.

The Marine Corps has never completely filled the quota of 16⅔ per cent of any graduating class. Therefore if your son applies himself properly while a Midshipman, he will in all probability be designated a Marine Corps candidate and subsequently appointed a Regular Marine Officer.

PLC and OCC

The Platoon Leaders Class is especially designed for college undergraduates other than seniors, and the Officer Candidate Course is for college seniors and graduates. Here we have two programs to accommodate the Marine Corps junior who decides to attend Dad's Alma Mater, or who is already attending college, or has graduated prior to making the decision to follow a Marine Corps career.

Let us first discuss the case of the son who wishes to attend the same college as did his father, or to attend a particular college not affiliated with the Naval Service. His best procedure to obtain appointment to commissioned rank in the Marine Corps is by joining the PLC. He may make application for enrollment in the PLC at any time from acceptance for admission to an accredited college to completion of his junior year in college. He should do this by contacting the Officer Procurement Officer nearest his father's duty station or the college he is attending. The location of this OPO can be determined by checking the list of Marine Corps Activities. He should particularly emphasize to the OPO that his father is a career Marine. Twenty-five PLC graduates are given regular commissions each year upon successful graduation from college. These individuals are selected on a competitive basis by the Naval Examining Board, based upon the recommendation of the Commandant, Marine Corps Schools, Quantico, Va. The Commandant, MCS, makes his recommendations after observing the candidates while attending PLC summer training at Quantico each summer. If your son is unable to obtain one of these 25 regular commissions, he will be appointed in the Marine Corps Reserve, and assigned to Basic School for further instruction. During Basic School, the Commandant, MCS is authorized to recommend to the CMC for appointment in the Regular Marine Corps not more than 5 per cent of the total reserve officer population in each course.

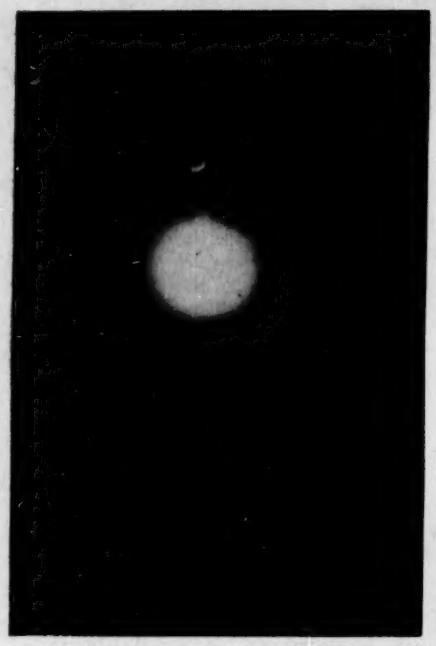
In addition, about 12 months after graduation from the Basic School, all reserve officers are afforded the opportunity to make final request for integration. It will be noted that the Basic School Regular officer procurement, and the follow-up integration, is available to all Reserve officers regardless of their source of procurement. That is to say, former members of the PLC and former members of the Officer Candidates Course are equally considered.

The young college senior or graduate who has belatedly determined that he desires a military career, may still accomplish his mission. He may enroll in OCC which leads to appointment in the Marine Corps Reserve only. Thereafter, he has the same opportunity for a Regular appointment or for integration as described above for Reserve officers.

In the final analysis, your son should be advised to make application for the program best suited for his motives. If he desires to be a Regular officer, he certainly should apply for the Naval Academy and the Naval ROTC program simultaneously. In case there is doubt about the qualifications of your son, or insufficient information is available at your location on which to base a decision, advice should be sought from the Commandant of the Marine Corps by official correspondence. You will find members of the staff at HQMC willing to analyze your son's problems and make the necessary liaison with the appropriate agencies to advise you in many technical circumstances.

Do not let these opportunities pass unnoticed. Encourage your son to compete for these educational opportunities and appointments to which he is entitled. USMC

LET THERE



THE NIGHT WAS COLD AND DAMP, with a slight overcast; just the kind of a night when it would be nice to be sitting before a roaring fire sipping a hot buttered rum. But at the battalion OP, the express train roar of outgoing harassing and interdiction fires substituted for the more pleasant crackle and roar of logs burning in a fireplace and a lukewarm cup of coffee could by no stretch of the imagination become hot buttered rum. From the sector of the right platoon of A Company, there was the pop of a trip flare and a sudden burst of light revealed the presence of shadowy figures who had no right to be in that locality. Almost simultaneously, from the opposite side of the OP a trip flare went up and seconds later, a 60mm mortar illuminating shell exploded overhead revealing that the enemy was attempting a penetration of the defensive position in the sector of the platoon of B Company. As battalion radio nets crackled with orders to supporting units, the entire battalion front was suddenly bathed in the glow of light from sections of searchlights strategically placed about 3,000 yards to the rear of the battalion front.

Obviously, here was a battalion well prepared to use illuminants to assist and support the defense of its assigned sector; as well prepared to use illuminants as to employ close air support or naval gunfire or any of the other means of support designed to assist the the infantry unit in its basic mission of closing with and destroying the enemy.

What, then, is battlefield illumination, and what means does a commander have at his disposal to use illumination to assist him in accomplishing his assigned mission?

Battlefield illumination is the lighting of the zone of action of ground and combat and combat-support troops by artificial means, other than invisible rays. The object of battlefield illumination is to provide friendly forces with the advantages of sufficient light to assist them in the conduct of ground operations at night.

Illumination may be either direct or indirect. Direct illumination is that form of battlefield illumination obtained by direct light from pyrotechnics and/or searchlights. Under conditions of direct battlefield illumination, though the intensity may be varied depending on the level desired, it is usually possible to deliver aimed fire from ground weapons. The commander must realize, however, that range estimation under conditions of direct illumination may not be the equivalent of the result obtained during daylight. Likewise, terrain forms tend to appear slightly different under conditions of direct illumination.

Indirect illumination, frequently termed "artificial moonlight," is a form of illumination obtained by using searchlights from defilade to illuminate either by diffusion or reflection. When lighting by diffusion, the technique is to direct the searchlight beam at a minimum elevation above the ground to cause the area beneath and to the flanks of the beam to be illuminated by the light diffused by particles in the atmosphere. A single 60-inch searchlight has the capability of illuminating an area approximately 800 yards wide and 15,000 yards deep. The intensity of the illumination on the ground decreases gradually as range from the searchlight and lateral distance from the center of the beam increases. Generally speaking, the maximum practicable illumination possible by diffusion on a clear

BE LIGHT

With the means at our disposal, there's no necessity to fight in the dark

By LtCol E. P. Dupras

dark night is approximately that light furnished by a quarter moon—barely sufficient for movement about the area. This intensity can be increased slightly and an appreciably greater area of diffused light obtained by crossing the beams of 2 searchlights.

When lighting by reflection, the technique is to direct the focused searchlight beam against low lying clouds (from 500 to 3,000 feet in elevation) so that the area illuminated receives both diffused light and the light reflected from the clouds. The area beneath the point of reflection receives a far greater intensity of illumination than can be obtained through diffusion alone. Generally speaking, the level of intensity obtained by reflection is about equal to the light obtained from a full moon.

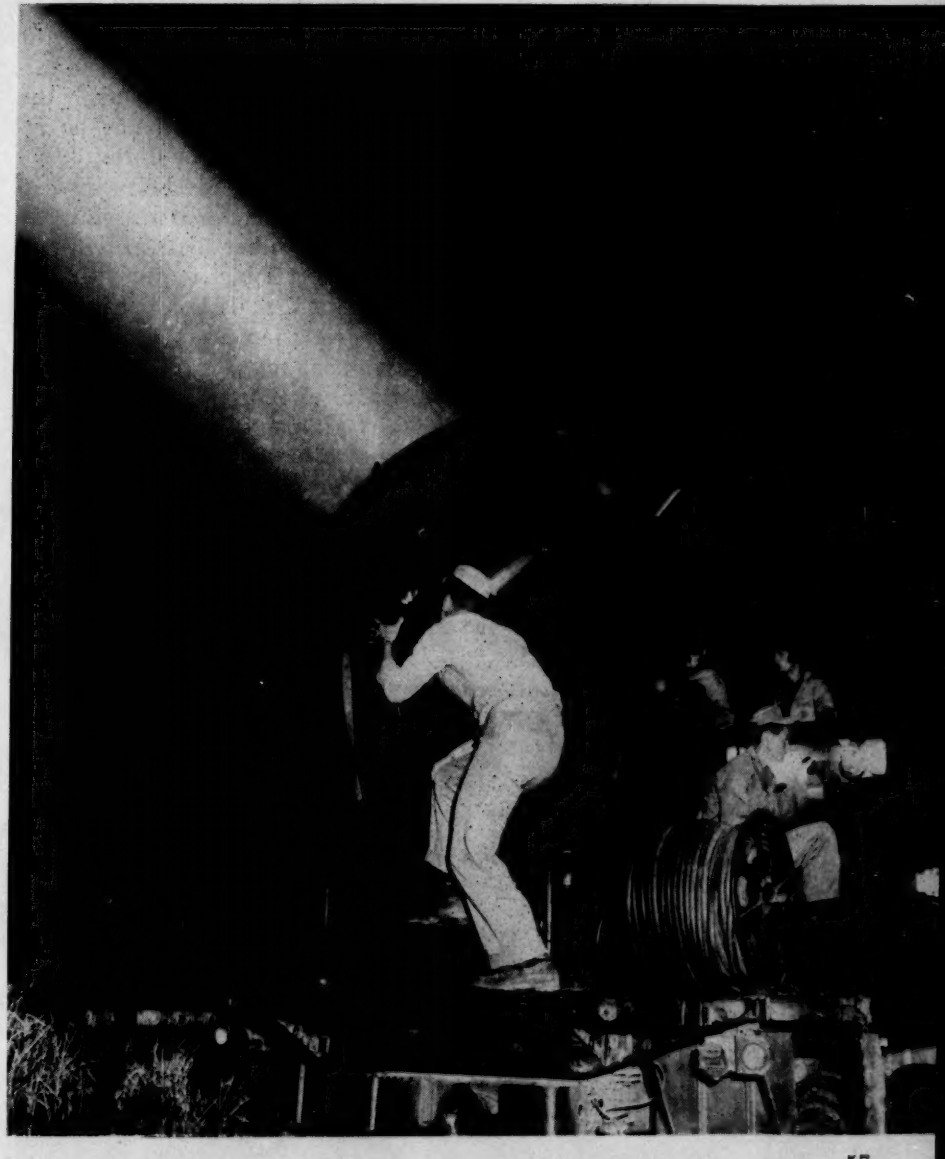
Now let's take a look at the varied weapons which the commander can call on to assist him in providing illumination for the battlefield.

First, the 60-inch, 800 million candlepower searchlight which has already been mentioned. This light, used in the direct illumination role on a clear, dark night, has a usable range of approximately 20,000 yards when the beam is focused. The beam may be spread to cover the target area but when this is done the net result is a decrease in intensity and range.

In the Marine Corps, this searchlight is carried by the Force Searchlight Platoon (T/O L-4201) with one light for each of 4 searchlight sections. In the US Army, the artillery normally has operational control of the searchlights used for battlefield illumination.

The searchlight is used best to provide direct illumination for it is capable of delivering continuous light for long periods with only minor adjustment and supervision. In this role, searchlight positions must give a clear line of sight to the target. Though this may appear dangerous since it would appear that the light would be an extremely vulnerable target, just the opposite has proven true in most cases. Observers in the beam looking toward the light are dazzled by the bright source and range to the light is invariably underestimated. However, for the provision of direct illumination, the beam is adversely affected by fog, smoke, or heavy dust which causes a decrease in range and intensity of the illumination provided.

Conversely, when used to provide indirect illumination, or "artificial moonlight," fog, smoke, or heavy dust may reduce the effective range of the beam but usually serve to increase the intensity of the illumination. In order to provide artificial moonlight throughout the combat area and well beyond forward infantry positions, the searchlights are emplaced in defilade 3,000 to 8,000 yards to the rear of the battalion front. It is well to point out two facts regarding the use of artificial



moonlight. An observer with his back to the lights can see the foreground much better than an observer facing the lights which indicates that we may enjoy some advantage over the enemy by using artificial moonlight. However, observers and objects on the skyline are silhouetted and therefore easily visible to an observer looking towards the lights. This means that movement over ridge lines under conditions of artificial moonlight must be undertaken with the greatest caution to avoid casualties to our personnel.

The next weapon available to the commander is the tank mounted searchlight—known during WWII and even now in the armored forces as the Canal Defense Light (CDL). The background of this term is interesting; it was coined by the British as a cover name for a project involving the mounting of carbon arc searchlights on tanks in lieu of guns. When US armored forces were organizing 4 battalions of searchlight tanks during WWII the cover name was carried over from the British effort. The concept of tank mounted searchlights has changed considerably over the years and now we find that a gun tank is equipped with an 18-inch, 40,000 candlepower searchlight mounted coaxially with the gun. These lights are capable of the same traverse as the turret of the tank and have a range of approximately 1,200 yards.

As can readily be deduced from a knowledge of the elevating capabilities of a tank gun, the tank mounted searchlight is much more suited for direct illumination than for creating artificial moonlight, though the latter capability should not be ignored. Illumination by diffusion obtained by crossing the beams of two or more tank-mounted searchlights, provided no other means of illumination is available, is preferable to sitting in the dark awaiting the enemy's next move.

The next category of illuminants available to the commander is that of aircraft flares. There are many types of aircraft flares designed and used to provide illumination for reconnaissance, observation, bombardment, landing and signaling. All aircraft flares, except those used for signaling, are of very high intensity, have a slow rate of descent and a relatively long burning time. No specific flare has been designed for ground support, but two of the higher intensity flares have been used for this role frequently and will be discussed briefly .

The two flares now in most common use for ground illumination are the M V, 600,000 candlepower, and the M VI, 1,000,000 candlepower. Both of these are parachute flares ejected from aircraft bombs. There is a delay setting on the bomb permitting it to fall from 300 to 1,200 feet prior to burst of the bomb and release of the candle. The candle falls at a rate of about 450 feet per minute and has a 3 to 3½ minutes burning period.

Some considerations in the use of aircraft flares by ground commanders to provide battlefield illumination immediately come to mind. Particular care must be exercised in determining the dropping point for flares since the wind may carry the flare for a considerable distance from the target. Likewise, it is very difficult to determine optimum dropping altitude so that maximum burning time of the flare may be gained and still provide the required intensity of light over the target. Usually, flares cannot be placed with the accuracy of illuminating shells or searchlight beams and the pilot of the dropping aircraft may require assistance by an artillery marking round or some other means to position his aircraft prior to making his drop. Finally, factors such as weather, availability of friendly aircraft and landing fields, and enemy air capabilities may impose limitations on the use of aircraft flares.

While speaking of aircraft flares and searchlights it may be well to point out another emergency means of providing illumination which may not be familiar to the average Marine. The US Navy possesses a carrier-based aircraft which mounts a searchlight in the million candlepower range. While the primary mission of this aircraft is other than providing battlefield illumination, it could be used during amphibious operations or in land warfare if carriers are operating within range of the battlefield.

Another category of illuminants available to the commander is that of artillery and mortar illuminating shells. All of the shells in this category now in general service use contain a parachute flare which will produce a sustained high candlepower illumination of varied duration depending upon the caliber of the shell. Illuminating shells are often referred to as "star shells" or as "flare shells;" the terms are synonymous.

Illuminating shells can be placed over the battlefield with the accuracy and flexibility inherent in the weapons delivering them. However, because of incomplete information as to wind speed and wind direction

over the target, it is difficult to predict the proper point of burst for illuminating any given target. Except under the most adverse wind conditions this problem can be overcome by proper adjustment by ground or air observers.

Employment of illuminating shells may be made in any one of the following manners:

1) Single round illumination of an area.

2) Double round illumination of an area. This is used for increased illumination during periods of low visibility or to increase the level of intensity and thereby increase the observing range. Both rounds are fired with the same time setting and at the same range and deflection.

3) Multiple rounds fired with a deflection spread. Two or more rounds fired simultaneously with the same time setting and the same range settings but with a variation in deflection. This is the normal method of illuminating a front in a defensive situation.

4) Multiple rounds fired with a range spread. Two or more rounds fired simultaneously with the same time settings and the same deflection but with a variation in range settings. This will increase the depth of the area illuminated and is the normal manner of employing illuminating shells in an attack situation.

5) Four round illumination square. A combination of methods 3) and 4) above. This is the most effective method of searching an area of suspected enemy activity.

The 60mm mortar has an illuminating shell with which it is possible to achieve a maximum range of 1,075 yards with a height of burst of about 450 feet. The shell has a powder train fuze which burns for about 14 seconds and then ignites a black powder expelling charge. This expelling charge lights the candle and then expels the candle and parachute assembly from the base of the shell. The candle burns for 25 seconds with a light of 145,000 candlepower while falling at a rate of about 10 feet per second.

For the 81mm mortar, the illuminating shell is armed with a powder train fuze which can be set from zero to 25 seconds. This flare burns for 55 seconds with a light of 250,000 candlepower.

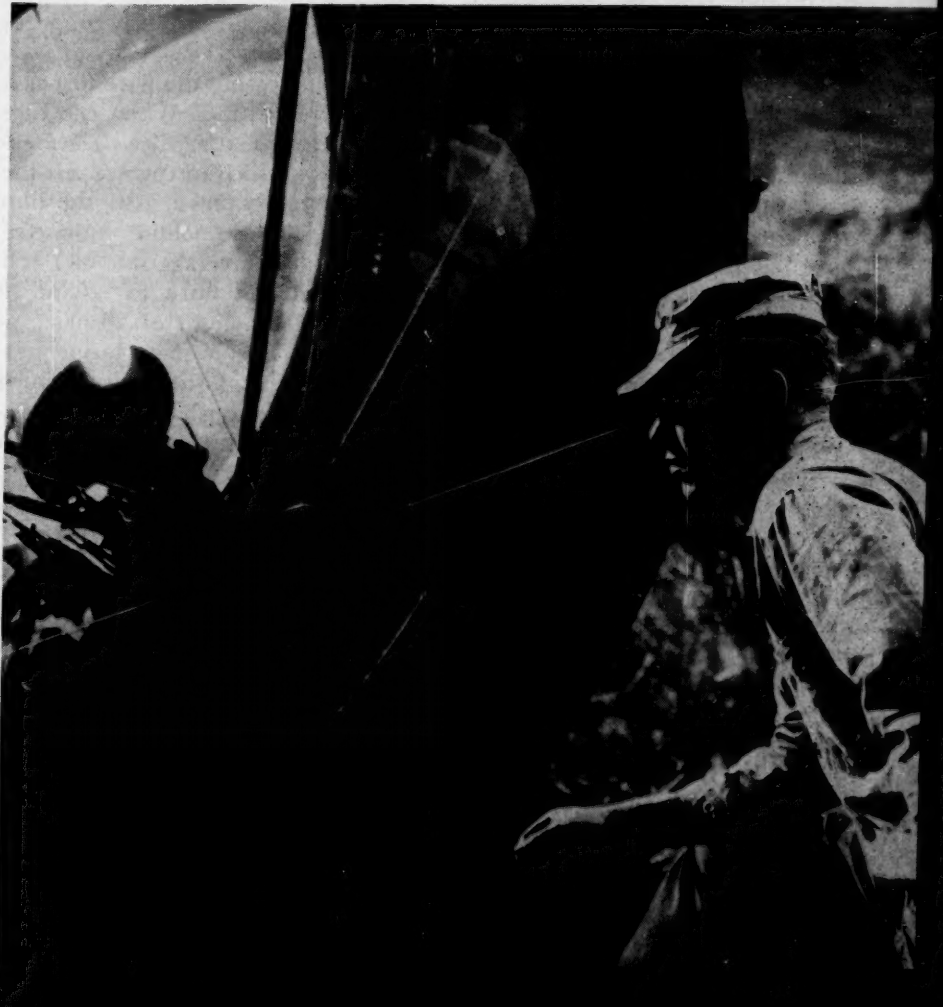
The 105mm illuminating shell is equipped with a mechanical time fuze which may be set from zero to 75 seconds and allows the shell to be fired at any range up to a maximum of 13,300 yards. The candle burns for a period of 43 seconds with a light of 300,000 candlepower.

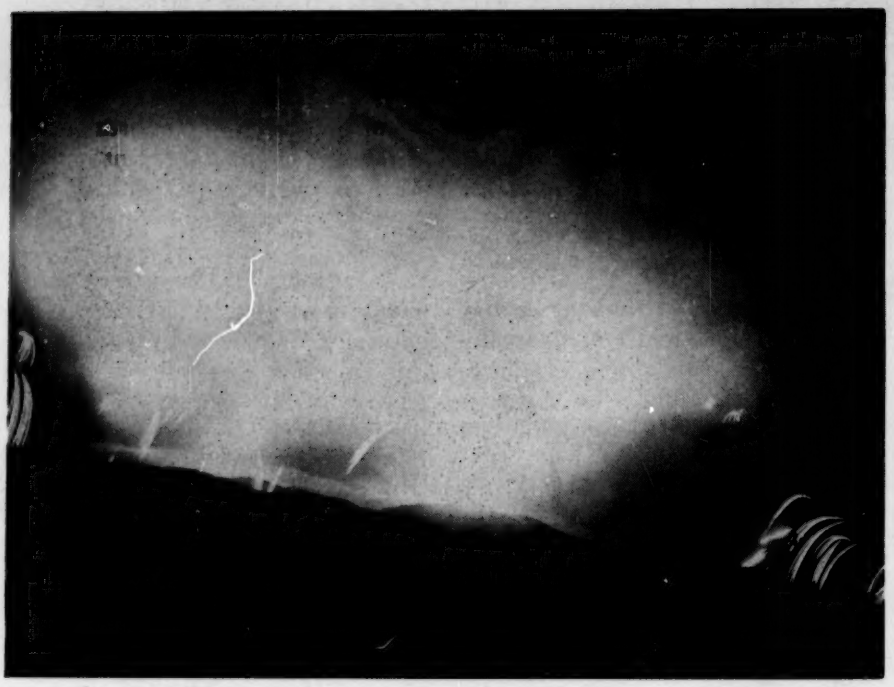
The 155mm illuminating shell has a mechanical time fuze which may be set from zero to 75 seconds and allows the shell to be fired at any range up to a maximum of 15,000 yards. The flare burns for a period of 60 seconds with a light of 400,000 candlepower.

Another category of illuminants available to the commander is that of naval shells and naval searchlights. Naval gunfire support vessels are supplied with illuminating shells for the 5-inch and 6-inch guns and frequently also have one or more 24-inch searchlights. Requests for illumination by naval gunfire means are made through normal naval gunfire support channels. The obvious limitations of naval gunfire, those of range and the limited supply of illuminating shells aboard any gunfire support ship, mean that in only rare instances during amphibious operations can illumination by naval gunfire be obtained. In any event, the capabilities of the naval gun to deliver the illuminating shell are worthy of consideration to supplement the illumination provided by artillery and mortar shells.

The final category of illuminants available to the commander is that of ground signals, illuminating grenades and trip flares. By their very nature, most of the illuminants in this category are designed for defensive operations only and will only rarely be used for offensive operations. These devices, usually available in quantity for individuals and small units, are a means of producing temporary illumination of a very small sector of a defensive front but are not suitable for producing continuous illumination.

Two types of trip flares are currently in use: the M48 and the M49. The M48 trip flare consists of a projector, a projectile and a trip firing mechanism. The flare is buried so that the top of the firing device is flush with the surface of the ground and is activated by disturbance of a trip wire attached to the firing mechanism or by pressure





applied to the top of the pressure button. When activated, the projectile is shot to a height of from 300 to 500 feet and a time fuze ejects the contents of the projectile after a 3 second burning period. The candle is lighted and burns for approximately 20 seconds with a light of 130,000 candlepower. The effective illumination covers a radius of about 300 yards.

The M49 trip flare is a stationary type of flare designed to be attached by nails to a stake, post or tree at a height of from 15 to 18 inches above the ground. A 40-foot trip wire is suspended at the same height above the ground and is attached to the trip flare. When the wire is moved or cut, a hand-grenade-type fuze level is released and the flare burns for about 1 minute with light of about 40,000 candlepower. The flare may also be hand thrown as an illuminating grenade.

The illuminating hand grenade is equipped with a short delay fuze (4-7 seconds) which insures that the grenade will not ignite instantaneously after being thrown. It burns for a period of about 25 seconds with a light of about 50,000 candlepower. Because the grenade is designed to burn on the ground, accurate placing of illumination is in direct proportion to the pitching skill of the individual throwing the grenade.

Of the variety of ground signals available for projection with the M1 Grenade Launcher, also of the hand-held variety, only those furnishing white light are considered suitable for battlefield illumination. Both the white star parachute and the white star cluster function in the same manner. When the signal is fired, the propelling charge ignites a fuze which burns through in about 6 seconds allowing the flare to reach maximum altitude. When the fuze burns through, it ignites the expelling charge which in turn expels the signal assembly and ignites the illuminant. The parachute supported stars fall at an average rate of 7 feet per second and burn for 20 to 30 seconds with a light of 20,000 candlepower. The 5 star cluster produces 5 freely falling stars which burn simultaneously for 5 to 7 seconds, each producing a white light of about 18,000 candlepower.

Both of these signals provide local illumination only and are used most commonly in defensive situations by outposts or troops on a defensive perimeter for detection of infiltrating enemy. The signals are extremely difficult to control and adjust during periods of very high winds. The normal technique is to fire the signals at high angle in order to secure a height of burst which will utilize the full burning time of the flare and thereby illuminate the greatest possible area. If it is desired to silhouette enemy troops, the signals may be fired at a low angle over or behind the enemy so that a low air burst will be obtained.

These are the categories of illuminating weapons which are available to the commander. However, there are other means which the commander may improvise on the battlefield to provide illumination, some of them so obvious that they are frequently overlooked. Starting of fires in brush, woods, grass or thatched roofs by firing WP shells, flares, tracer bullets or any other suitable weapons into them may serve to silhouette enemy positions. These brush or grass fires will also have a great harassing value in addition to providing a degree of illumination.

High-danger flares may be improvised by using a No. 10 can partially filled with sand which is saturated with a mixture of lubricating oil and gasoline. The flare is lighted and placed on a likely avenue of approach into our position and fired by either an illuminating grenade, an incendiary grenade, or by detonating the the flare by wrapping it with prima cord and using an electrical or mechanical blasting circuit.

These then are the means available to a commander to assist him in illuminating the battlefield to his front, be his mission defensive in nature or that of conducting a night attack. The tactical considerations entering into a decision to use battlefield illumination are many and varied and but two will be mentioned here. First and foremost, once the decision has been made to use illumination for a particular operation, the highest echelon concerned in the operation must exercise control of all of the means of illumination which will be used. And, as a broad rule of thumb, only that amount of illumination necessary to accomplish the mission should be used. Whether the illuminant used is searchlight, shell, aircraft flare, ground signal or improvised flare; whether the illumination is direct or indirect; the highest commander involved must exercise control and must use only that amount of illumination necessary to accomplish his mission. USMC

passing in review

BOOKS OF INTEREST TO OUR READERS

Champion For France . . .

THE CALL TO HONOR—Charles de Gaulle, 319 pages. New York: the Viking Press. $5.00

In this recital of the role he played during the significant period 1940-1942, Charles de Gaulle makes a late contribution to the list of personal memoirs published since the end of WWII. Certainly no Frenchman has better reason to remind the world of how right he was when, during the 1930s, France chose to close its mind to the changing concept of war in spite of his repeated warnings. Yet in *The Call To Honor* de Gaulle avoids the "I told you so" attitude to which he is certainly entitled. He does, nevertheless, refer to his prewar writings to explain his position.

One feels, in the opening chapters of the book, de Gaulle's fierce belief in France and his deep bitterness at the realization that its leaders were willing to accept defeat in their conviction that the Wehrmacht was invincible. He went to England a relatively unknown individual and by sheer force of will became the symbol of a France still willing to fight for its freedom. It is interesting to recall that while governments of other countries fled to England, de Gaulle, in his refuge, did not initially represent France. Many countries, including our own, maintained some form of relations with Vichy. Yet with all his disadvantages, including that of having been condemned to death in absentia, de Gualle was able to rally the support which convinced Winston Churchill in 1944 that de Gaulle's Provisional Government could indeed be considered as representative of France.

De Gaulle tells of his self imposed mission, to see France arise from its ignoble defeat and resume its place in the fight being continued by its allies. He also speaks of his determination to safeguard the French Empire. In this latter task he reveals a distrust of British motives in the Middle East where they involve French colonies. He writes of his efforts to rally Equatorial Africa to his cause and reveals his difficulties and disappointments in this partially successful endeavor. He ends his book with an account of the gallant defense of Bir Hakeim, in the middle of 1942; a battle where French arms regained some of their lost lustre.

The story that de Gaulle has to tell is one already well known. It is not an apology in the sense that Weygand's *Recalled To Service* attempts to justify the acts of man caught in a web of most difficult circumstances. De Gaulle has no apology to make. He states what he did with frankness and is equally candid in his unfriendly comments on British and United States policies and actions.

It is perhaps unavoidable that *Call To Honour* should be compared to similar books which have preceded it. In such a comparison one feels that de Galle should have said more than he does. Here is the man who almost alone raised France from the depths of a shattering defeat and yet his memoirs of these stirring days make one wish for more details, more reasons why, more causes and effects. In spite of these shortcomings, which some may in fact consider to

be a blessing after the post-war deluge of words, the book has merit, even if only because it is de Gaulle who writes of things that only he can know so well.

Charles de Gaulle is a cold austere individual. Officers who knew him in England speak approvingly of his unswerving devotion to his cause. He is not a man toward whom people warm on meeting. As a symbol he succeeded; later when war-stirred emotions settled into peaceful channels, de Gaulle failed as a political leader. However, even today the Cross of Lorraine is proudly worn on the tunics of certain French officers. And the Allies of World War II owe a debt to this man who rekindled in open battle and in the undeground resistance the fighting qualities of the people of France.

Reviewed by LtCol V. J. Croizat

Defeat at Sea . . .

HMS ULYSSES—Alistair MacLean. Garden City, N. Y.: Doubleday and Company, Inc. 316 pages. $3.95

Alistair MacLean has put together a book which challenges the statement that truth is stranger than fiction. He is the son of a Scottish parish minister and a graduate of Glasgow University. He spent 5 years in the Royal Navy as a torpedoman during World War II, with duty ranging from the Arctic to the Far East. He must have served under some good officers because the leadership of his fictional characters in *HMS Ulysses* is superb.

A novel which starts with the captain, executive officer and surgeon of a ship defending their crew who had mutinied the day before is liable to be tossed aside as incredible. *HMS Ulysses* has that beginning. Furthermore, the admiral whose flag is aboard the mutinied ship also defends the crew. The author not only makes the reader believe that beginning but takes the ship through a week of similarly "stranger than fiction" action-packed days.

After World War II, the author settled in Glasgow as a teacher. An announcement appearing in the *The Glasgow Herald* for a short story competition "coincided with one of those periods of acute financial distress which chronically assail us teachers." MacLean won and a publisher suggested he write a novel. The result—*HMS Ulysses*. We owe a debt of gratitude to *The Glasgow Herald* and the publisher, William Collins.

The *Ulysses*, a 5,500 ton cruiser, is fitted with the latest radar gear. The ship is the only one so equipped and has had no time off from escorting convoys to Murmansk. Admiral Starr, Assistant Director of Naval Operations acidly explains the reasons for Admiralty orders assigning *Ulysses* to the Arctic run two days after the mutiny. Not to send the ship will be to finish it off as a fighting unit.

The surgeon loses his temper and vainly tries to explain what months of no shore leave and continued runs in the Arctic can do. He describes the cold, the fatigue, and the strain of being ever on the alert. Admiral Starr calls the surgeon a sick man and relieves him of his duty. Captain Vallery and the other officers say that the surgeon is indispensable. The admiral leaves the surgeon aboard and leaves with veiled threats against the careers of all 4 officers.

The following day the *Ulysses* gets under way and moves into the teeth of

the great Arctic storm of 1942. The seas are monstrous and the winds over 100 knots. With below freezing temperatures, the ships are completely sheathed in ice. One of the accompanying carriers has her flight deck bent back into a fantastic U-shape. The weather took its toll before the escort vessels ever joined up with the convoy. Two more carriers are lost, leaving only one.

For the next 3 days, Adm Tyndall is completely outmaneuvered by the Germans. A submarine wolf pack surprises the convoy and sinks the last carrier. The *Hipper*, a German cruiser, engages *Ulysses* in a snow storm and conceals the fact that her radar gear is equal to that of *Ulysses*. She lays a trap with submarine attacks following in almost ceaseless succession, each one executed as if the Germans knew exactly what the convoy would do. The admiral, known affectionately as "Farmer Giles," realizes that he has been completely whipped, that his every decision has played right into enemy hands and becomes an old man in a matter of minutes. He leaves the bridge in a stupor and returns later to sit in his chair barefooted and with only his pajamas on under his coat. In the heat of battle no one notices until the admiral is frozen.

Captain Vallery is promoted to admiral and takes over the squadron. The surgeon has tried unsuccessfully for months to get Vallery to submit to a physical examination. Not only the captain but also numerous of the crew have tuberculosis, brought on by the cold, damp and eternal watches which keep them from having hot food. Vallery is dying on his feet and the whole ship knows it. He hangs on for two more days during which the *Ulysses* is the main target for repeated air and submarine attacks. The entire convoy has run out of depth charges and has no way to fight the enemy submarines. Vallery finally dies of exhaustion.

Turner, Vallery's executive officer, takes over and when the *Hipper* appears, he orders full speed ahead and makes a valiant attempt to ram the enemy ship at forty knots. He has no other means of fighting back, his crew is almost completely gone and his turrets are out of action. An explosion in his forward magazine blows the bows off the *Ulysses* and she speeds to the bottom driven by her powerful engines.

Without pretense, this book believes that bravery is a common thing among men when properly led. The characters are never really described and yet they are so vividly portrayed, the reader takes them into his heart as friends. The military men will find food for thought in the way Captain Vallery meets situation after situation and still keeps alive in his men the will to fight. Even after his death, the few remaining members of his crew fought, not for home and country, but for Richard Vallery.

In retrospect, the characters seem overdone — their virtues too virtuous; and the action seems too pat — heroes and villains alike appear at the most propitious times. However, this is strictly hindsight. It is a gripping book and even though any synopsis is bound to seem impossibly melodramatic, the book somehow escapes that charge. One feels that the author knows what he is talking about and that such things did happen or could have happened.

HMS Ulysses is a fine book. It's been said before but never with more reason —"You can't put it down, once you start to read." The cover says MacLean is working on a new novel of war in the Mediterranean. I can't wait.

Reviewed by Col W. F. Prickett

Bee Ni Ju Koo Biography . . .

GENERAL LEEMY'S CIRCUS — Earl Snyder. 175 pages. Exposition Press, $3.00

This, while a simple and entertaining book to read, is a complicated one to assess. The afterthoughts crop up for weeks. Initially one is pleased by the fast pace of the author's stories of the Twentieth AF — some humorous, some shocking, some grim. These B29s, bombing Tokyo in non-stop round trips from Saipan, were the forerunners of our long range aircraft in today's Strategic Air Command. Significantly, Gen Leemy, as the Japanese apparently mangled the name, still heads this extensive and lengthy developments—and it is typical of the up-cropping afterthought that one hopes General Le Mayovich in his long tenure, has made the years count.

But having made this observation, one immediately wonders how fair the author's judgment has been in selection of his anecdotes for retelling. Not in any clinical sense but more as a gossip columnist he relates, as an example, the story of the pilot of a B29, who, inbound on a fire bombing mission, sees the leaping, mile-high flames of his target — Nagoya. Above the flames, bursting ack-ack warns him that, despite the havoc already wrought by preceeding bombers, the run-in to bomb release line will be no picnic. Then, of an incredulous crew, he asks, "What do you say if we don't go in there? Just turn around and go back and drop our bombs in the ocean?" And, despite all that had gone into making that mission a success, they did.

Even though the propriety of bringing forth such skeletons may be in doubt, they bolster the conclusion that excruciating growing pains are inevitable in a wartime expansion. The embryonic troubles of the Army Air Corps in fashioning the long range striking power that was the Twentieth AF, were vastly complicated by disregard for the principles of command and discipline. Thus, when bewildered crew members of an intentionally aborted mission report the incident to their squadron commander, he replies, "I don't know for sure what to do. I have an idea that maybe it will get straightened out. Can you give him (the pilot) one more chance?" They did. The Superfort was never heard from again.

Frankness marks these rather grim and shocking anecdotes. It also marks the more playful ones, some of which may make it even more difficult in the next war than it was in the last to get an adequate ration of "comforts." Navigator Snyder is frank, too, about the value of team effort. His favorite service for months was the US Navy, until the Marines won for the B29s the greatest comfort of all — a landing field for wounded, fuelless Superforts on Iwo Jima.

Reviewed by Col N. J. Anderson

A Good Dollar's Worth . . .

RISKS: THE KEY TO COMBAT INTELLIGENCE — Col. E. C. Townsend. 76 pp; bibliography. Military Serivce Pub. Co., Harrisburg: 1955. $1.00

The Intelligence Officer is usually the most set-upon individual in the whole staff. In peacetime he suffers from a lack of business and in wartime he is expected to divine the future. We pay lip service to the fact that Intelligence is a vital staff function but, having done that, we are apt to dismiss the whole matter as finished business. Of course we have not gone as far as the British service where the Intelligence bloke is a junior partner, so to speak, in the Operation's bailiwick. To that extent, at least, the 2-Section has held its ground.

Colonel E. C. Townsend of the United States Army has examined this problem of the Intelligence Officer in an excellent little book entitled, *Risks: The Key to Combat Intelligence*. He has given his subject an objective, sharply defined treatment that makes for interesting reading and shows exceedingly good sense.

It is Col Townsend's belief that combat intelligence is the real key to the success of tactical forces in battle in the atomic era. But he recognizes that there is a compelling demand for improvement in our combat intelligence techniques.

He contends, and rightfully so, that the true relationship between command and intelligence is not generally recog-

nized. Too often the G2 is regarded as something between a witch doctor and a latter-day Merlin. It is unfortunately true that many of the incumbents willingly contribute to this false impression of the G2's functions. The fault, however, lies not wholly with the individual —our training system is also to blame.

In our schools and in our training manuals we reiterate that one is concerned with the enemy's capabilities, not his intentions. This precept is based on the eminently sound thesis that since most people don't know what's in their own minds, why then it's manifestly impossible to determine what the enemy is currently mooning about. I personally support this proposition, but I have long been completely foxed by our inexplicable habit of listing, at the end of the intelligence estimate, the "relative probability of adoption" of the capabilities we have assigned the enemy. If this isn't our old bugaboo of determining the enemy intentions, it comes so close to it that the difference is not distinguishable to the naked eye.

Colonel Townsend takes to task this curious — and dangerous — habit of divining the relative probability of what the enemy is believed to be capable of doing. As he puts it: "The Intelligence Officer is not clairvoyant. His predictions are no more reliable than those of any other officer."

The first word in the title of the book being discussed here is "risks." The author points out that the commander is faced with both known and unknown risks and it is the latter—the unknown —that makes war an art rather than a precise science. The job of the Intelligence Officer, his whole *raison d'etre*, is simply to relate all of his work to the reduction of the unknown risks facing his boss. Once the Intelligence Officer can locate the enemy and determine his strength (personnel, equipment, etc.)— and these are the real EEIs—then the commander is dealing with a known risk.

Colonel Townsend quite properly questions the current practice of having the G2 publish an intelligence estimate to the command. He believes that in any command there should be only one estimate — the commander's. The G2 should be the Intelligence Officer to the commander, rather than the Intelligence Officer to the command. This may seem to be a pretty play on words, but it goes much farther than that. As the author points out, there is a world of difference between the two: as Intelligence Officer to the command, he publishes his personal opinions for the edification of all hands; as Intelligence Officer to the commander, he expresses his private thoughts, guesses and opinions—but they are for the commander's ears alone. If the commander considers such opinions of sufficient importance or value, then they can be included in the commander's estimate.

The author discusses various other aspects of the intelligence problem that space doesn't permit me to mention. But I can say this: Trade a dollar for *Risks: The Key to Combat Intelligence*. It's money well spent.

Reviewed by Col R. McC. Tompkins

Sociological or Political? . . .

THE ARMENIAN COMMUNITY — Sarkis Aatamian. New York: Philosophical Library, 1955. 479 pages, maps and index. $4.75

This book purports to give a picture of the Armenian community today, with a detailed treatment of the background of the community and a description of the historic factors which brought it to its present condition. Mr. Atamian's work is obviously the result of a tremendous amount of study and research and he is well qualified, by virtue of ability in the language and access to prime source material, to produce it.

It is difficult to classify Mr. Atamian's work. It cannot be called a history, although it consists largely of historic data. The publisher's claim that it is a "critical and analytical study of the cultural development of the Armenians during the past century" does not hold water. Perhaps the fairest estimate of it is that it is a strong and well-documented expression of a rigid partisan point of view.

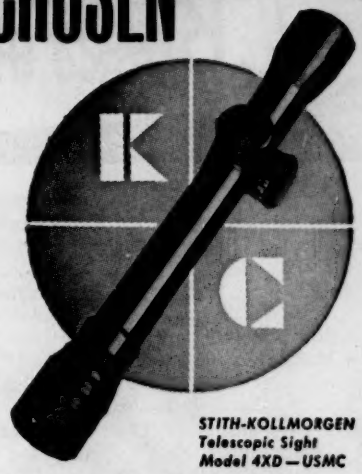
It is this bias, freely admitted by the author, which makes the book a distinct disappointment. Armenia, the abstraction, deserves a history intelligible to the Western World. An objective, dispassionate account of the long, colorful existence of the Armenian people would be a major contribution.

This work contains a quick summary of Armenian history from its beginning up to the mid years of the 19th Century. At that point just prior to the Russo-Turkish War of 1877-78 he begins the detailed intricate discussion which he follows throughout the rest of the volume. The discussion concerns the comparative merits of the Hunchak and Dashnak parties within the Armenian community. In this matter, the author sees only white and black, with no intervening shades of grey. The Dashnak group, dedicated to the building of an Armenian Nation, is right — and the Hunchak, excepting only its militant spirit, is consistently wrong.

The book is full of minute detail and is profusely documented. But it is clear that the author has never quite made up his mind as to whether he is writing a sociological or a political study.

Reviewed by Cdr George Donabedian, USN

CHOSEN by the corps



STITH-KOLLMORGEN
Telescopic Sight
Model 4XD — USMC

This lightweight, all aluminum, deadly accurate, internally adjustable SNIPER SCOPE is a superb combat instrument.

For the commercial counterpart of this famous scope, ask your sporting goods dealer for BEAR CUB rifle scopes.

For more than fifty years we have manufactured high quality optical instruments for the Armed Services. Our broad experience includes submarine periscopes, fire control instruments, navigation instruments and many other special optical instruments.

KOLLMORGEN Optical CORPORATION
Plant: Northampton, Massachusetts
New York Office: 30 Church Street, New York 7, N. Y.

YOU CAN *RELY*
ON
EVALUATED ARMS
The Champions Do!
Winchester Rifles & Shotguns
Smith & Wesson Revolvers
High Standard Target Pistols
Dinan-Colt Match Pistols
Sturm-Ruger Target Pistols
Western Super Match
Ammunition
and
Selected Accessories
EVALUATORS LTD.
QUANTICO, VA.
Showroom:
#1 Woodland Dr.,
Triangle, Va.
George O. Van Orden
Brig. Gen., USMC, Ret'd.
President

Books on Parade

1 Maneuver in War
Col Charles A. Willoughby
An excellent inventory of basic military ideas and their execution on the field of battle. $3.00

2 Infantry Attacks
Erwin Rommel
An outstanding reference on small unit leadership and tactics. A special for members of the Marine Corps Association only. No discount $3.50

3 Decisive Battles
MajGen J. F. C. Fuller
"The decisive battles of the world decide the destinies of nations." Here in this great book is their influence upon history and civilization. $7.50

4 Fix Bayonets
Captain John W. Thomason, Jr.
A military classic about WWI Marines in France. $4.00

5 Commando Extraordinary
Charles Foley
An enthralling story of the last war and the potentialities of Commando tactics in a future war. $3.75

For Your Bookshelf

MILITARY

6 US MILITARY DOCTRINE, *Smith* — $3.50
7 US MARINES & AMPHIBIOUS WAR, *Isely & Crowl* — $7.50
8 THE POWER OF PERSONALITY IN WAR, *Freytag-Loringhoven* — $3.00
9 ON WAR, *Clausewitz* — $5.00
10 THE NEW WARFARE, *Barclay* — $2.75
11 ATOMIC WEAPONS & ARMIES, *Miksche* — $5.00
12 STRATEGY, *Hart* — $5.95
13 WINGS OF THE DAWN, *Wilson* — $3.50
14 THE RIVER AND THE GAUNTLET, *Marshall* — $5.00
15 KESSELRING — A SOLDIER'S RECORD, *Kesselring* — $5.00
16 MEN AGAINST FIRE, *Marshall* — $2.75
17 CAVALRY OF THE SKY, *Montross* — $3.00
18 PANZER LEADER, *Guderian* — $7.50
19 A MILITARY HISTORY OF THE WESTERN WORLD, *Fuller*, VOLS. I & II, *each* — $6.00
20 ATOMIC WEAPONS IN LAND COMBAT, *Reinhardt and Kintner* — $3.95
21 INFANTRY UNIT LEADERS GUIDE, *Multop & Barrett* — $1.75

HISTORICAL

22 IRREGULARS, PARTISANS AND GUERRILLAS, *Blacker* — $5.00
23 CORAL AND BRASS, *Smith* — $3.00
24 FAMOUS AMERICAN MARINES, *Lewis* — $3.75
25 PORTRAIT OF PATTON, *Semmes* — $6.00
26 NINE RIVERS FROM JORDAN, *Johnston* — $5.00
27 COMMANDO EXTRAORDINARY, *Foley* — $3.75
28 THE MARSHALLS, *Heinl & Crown* — $3.25
29 MARINES IN THE CENTRAL SOLOMONS, *Rentz* — $3.25
30 DEFEAT AT SEA, *Bekker* — $3.95
31 FROM LEXINGTON TO LIBERTY, *Lancaster* — $5.75
32 BATTLE FOR TARAWA, *Stockman* — $1.75
33 BOUGAINVILLE AND THE NORTHERN SOLOMONS, *Rentz* — $2.25
34 CAMPAIGN ON NEW BRITAIN, *Hough & Crown* — $4.25
35 GUADALCANAL CAMPAIGN, *Zimmerman* — $4.75
36 IWO JIMA: AMPHIBIOUS EPIC, *Bartley* — $4.75
37 OKINAWA: VICTORY IN THE PACIFIC, *Nichols & Shaw* — $5.50
39 YEAR OF DECISIONS, VOL. I *Truman* — $5.00
40 THE PUSAN PERIMETER, *Montross and Canzona* — $2.00
41 FIX BAYONETS, *Thomason* — $4.00

CIVIL WAR

42 THE WEB OF VICTORY, *Miers* — $5.00
43 BANNERS AT SHENANDOAH, *Catton* — $1.95
44 A STILLNESS AT APPOMATTOX, *Catton* — $5.00
45 THEY CALLED HIM STONEWALL, *Davis* — $5.00
46 R. E. LEE, *Freeman* — $27.00
47 GRANT AND HIS GENERALS, *Macartney* — $5.00
48 BEAUREGARD, *Williams* — $4.75

POLITICAL

49 VORKUTA, *Scholmer* — $3.75
50 AMERICAN MILITARY POLICY, *Bernardo & Bacon* — $5.00

MISCELLANEOUS

51 SMALL ARMS OF THE WORLD, *Smith* — $10.00
52 GUIDEBOOK FOR MARINES — $1.50
53 THE MARINE CORPS WIFE, *Jerome & Shea* — $3.50
54 KILL OR GET KILLED, *Applegate* — $3.75
55 GUN DIGEST (1956), *Amber* — $2.50

MILITARY JUSTICE

56 NAVAL SUPPLEMENT TO MANUALS FOR COURTS-MARTIAL — $1.50
57 MANUAL FOR COURTS-MARTIAL, US, 1951 — $3.25
58 MILITARY JUSTICE UNDER THE UNIFORM CODE, *Snedeker* — $17.50
59 LAW OFFICER, *Dep't of the Army* — $.75
60 TRIAL COUNSEL AND DEFENSE COUNSEL, *Dep't of the Army* — $.40

HUMOR

61 NO TIME FOR SERGEANTS, *Hyman* — $2.95
62 THE REBEL YELL, *Smith* — $2.00

FICTION

63 THE SIXTH OF JUNE, *Shapiro* — $3.95
64 BATTLE CRY, *Uris* — $3.95
65 THE MAGNIFICENT BASTARDS, *Crockett* — $3.50

BEST SELLERS

66 ANDERSONVILLE, *Kantor* — $5.00
67 MARJORIE MORNINGSTAR, *Wouk* — $4.95
68 TEN NORTH FREDERICK, *O'Hara* — $3.95
69 CASH McCALL, *Hawley* — $3.95
70 AUNTIE MAME, *Dennis* — $3.50
71 THE TONTINE, *Costain* — $5.95
72 THE MAN IN THE GRAY FLANNEL SUIT, *Wilson* — $3.50
73 AN EPISODE OF SPARROWS, *Godden* — $3.50
74 BOON ISLAND, *Roberts* — $3.75
75 ISLAND IN THE SUN, *Waugh* — $3.95

THE GAZETTE BOOKSHOP • BOX 1844 • QUANTICO, VA.

BOOK ORDER FORM

List Price of Books Ordered ..... $.....
Less 10%* *(Members Only)* ..... $.....
☐ Payment Enclosed ☐ Bill Me Amount $.....

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75

SEND TO: (Please print)

NAME & RANK (PRINT) _____

ADDRESS _____

_____

Mar _____

_____

*Discount does not apply on shipments to foreign addresses.

"I miss you"

"Good to hear your voice"

"Welcome Home"

"Happy Birthday"

"See you this evening"

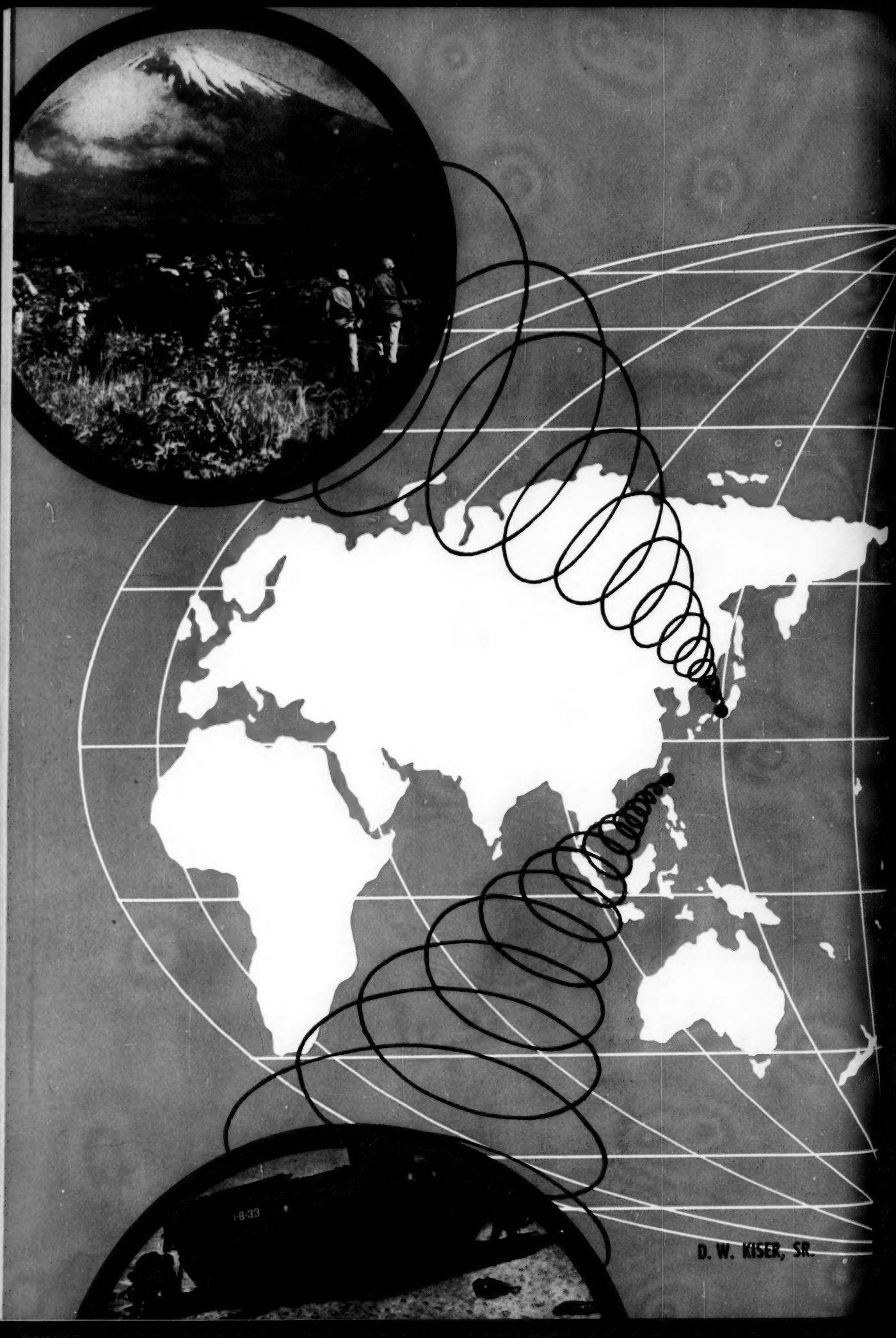
These simple, friendly words are said many, many times over the telephone each day.

It is just such simple, friendly words from one person to another that make the telephone such an important part of our lives.

Surely it is indispensable in emergencies. But its greater value may be in carrying friendship and love and happiness across the miles.

For without the telephone, time and space would rush between us. And many of us would be so much alone.

BELL TELEPHONE SYSTEM


I-8-33
D. W. KISER, SR.